DENTAL HEALTH

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THE JOURNAL OF THE BRITISH SOCIETY OF DENTAL HYGIENE AND THERAPY

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STAND NUMBER 33

EMS

LISTEN TO DR DEVAN RANDI, SPECIALIST IN PERIODONTICS, SPEAKING ON FLAPLESS REGENERATION - MINIMALLY INVASIVE ADVANCES IN NON-SURGICAL THERAPY (MINST).

FRIDAY 22ND NOV | 14:35
PARALLEL SESSION B1

This lecture, supported by EMS will explore the concept of minimally invasive non-surgical therapy including the biological rationale as well as consideration for novel techniques aimed at promoting regenerative outcomes.

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DENTAL HEALTH

The mission of BSDHT is to represent the interests of members and to provide a consultative body for public and private organisations on all matters relating to dental hygiene and therapy. We aim to work with other professional and regulatory groups to provide the highest level of information to our members as well as to the general public. The Society seeks to increase the range of benefits offered to members and to support this with a clear business and financial strategy. The Society will continue to work to increase membership for the benefit of the profession.

BRITISH SOCIETY OF DENTAL HYGIENE AND THERAPY
Promoting health, preventing disease, providing skills

bsdht.org.uk

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ON THE COVER

...and running through this issue, read some of the highlights over the last 75 years.

First meeting of the British Dental Hygienists' Association. **July 1949**

THE ORAL HEALTH SUMMIT

28-29 NOVEMBER 2025

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2025 JOINT CONFERENCE HOSTED BY

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BSP
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GUEST EDITORIAL

Oral Health Conference 2024 are you ready?

Susan Bissett *graduated with a Diploma in Dental Hygiene from Newcastle in 1994. In 2021, Susan took up a clinical lecturer post at Newcastle University. She is currently Deputy Programme Director for the BSc in Oral & Dental Health Sciences and principal investigator/co-investigator on a number of studies. Susan is a member of the BSDHT Editorial Board.*

Conferences provide us with an opportunity to accumulate CPD, engage with our industry partners and be inspired by innovation. However, attendance can involve burning the candle at both ends as we catch up with old friends, and make new ones, so it is common to return home exhausted, but excited to get back to work and share with colleagues and patients all the things that have inspired you.

In September I attended the British Society of Oral and Dental Research (BSODR) conference, in Newcastle upon Tyne. The organisers invited me to represent academic dental care professionals (DCPs), during an undergraduate (UG) symposium, which aimed to inspire students to get involved in research. The other panel members were all dentists at various stages of their career, but what was interesting was that each of us agreed that our way into research had come as somewhat of a surprise! Only one of the dentists had followed what may be described as a traditional pathway. DCPs do not have a research career pathway as such, so it was refreshing to be among other dental researchers who had stepped into the unknown, like I did years ago.

Conferences are the place for dissemination of research and impact, an important step in the research cycle and core business for anyone involved in research. This year I completed a study which investigated the feasibility of offering atrial fibrillation (AF) screening in a dental hospital setting, and I presented my findings in a poster at the BSODR conference. This was an interesting study, from start to finish! One midweek afternoon, in the Spring of 2022, I received a call. Lis Neubeck, Professor of Cardiovascular Nursing at Edinburgh Napier University School of Health and Social Care had seen a social media post regarding some research I was doing and decided to reach out to see if I would be interested in hosting their AF study in Newcastle. The study was funded by Daiichi Sankyo UK Ltd, a global healthcare company that creates innovative pharmaceuticals to address diverse medical needs associated with oncology, migraines, and cardiovascular disease, as well as other conditions. The study used a device called KardiaMobile (AliveCor USA), a NICE recommended six-lead personal ECG heart rate monitor, to screen for AF. It is a minimally invasive test, requiring your fingertips to rest on a small device which reads your ECG and within seconds sends a reading to a mobile phone.

Growing evidence suggests an association between severe periodontitis and stroke mediated by AF. AF can increase risk of ischaemic stroke five-fold with a two-fold increase in mortality compared to the general population. Stroke risk for those with AF can be reduced with anticoagulants, and as AF can be asymptomatic, screening may increase diagnosis. Whilst studies had looked at AF screening in other settings, this was the first study to be conducted in a dental setting. This study is particularly important to me as my mother has been severely impacted by a series of ischaemic strokes and subsequently needs around the clock nursing care. For more information about the study and its findings, you can access the published conference abstract (the paper is currently under construction!), but I can say that we did identify potentially new cases of atrial fibrillation, including a patient who was hospitalised and began a regime of anticoagulation which may have saved their life.

I share the story of this study because it illustrates the unexpected way that research can work. We were not the first choice of dental hospital. Lis was under pressure to find a host for the study after another site dropped out, and after a quick social media scroll, she found me! Working with a dental professional allied to dentistry, as she is allied to medicine, was an opportunity too good to miss so she 'cold called' me. This was a clear case of being in the right place at the right time.

I look forward to seeing you in Harrogate. Come along to publications team's session on Saturday 23rd and learn more about becoming involved in research.

Susan Bissett

Publication of the first BDHA Newsheet **Dec 1949**

FROM THE PRESIDENT

When I think back to this time two years ago, it barely seems possible. Then it was winter, moving slowly into spring and to the blossoming start of my time as your President. Now as I write, it is the winter of my presidency.

Autumn diary

It has been a busy two years and the past two months have been no exception. Following the summer break, we continued having online meetings with the DPA and have future meetings planned with the BDA and the LDC Confederation. I was fortunate to have been invited to the ADG's launch of its 'Seven Step Plan' to improve the nation's oral health. It is so important to maintain representation at these events to remind the wider dental professions that we are very much here!

In September, the OCDO brought together the representative organisations at a roundtable event in London. This followed the initial meeting at the BDIA Showcase in March. We enjoyed a number of presentations from speakers including, Jason Wong, Iain Chapple, Jane Luker and Abhi Pal. Then we were split into working groups to discuss 'recruitment, retention, and career pathways', and suggest positive solutions. Similar conversations have been had in the past, but this felt different, and I really hope we have a CDO who will drive the concept of skill-mix to benefit us all, especially our patients.

At the end of September, we hosted a successful meeting in Edinburgh with the European Dental Hygienists' Federation, with 22 of the 24 member countries represented from across Europe. We also welcomed Hungary to join the Federation, the 25th country in the EDHF's 25th year. A further cause for celebration!

BSDHT had a presence at the Dentistry Show in London in October. The subject of my presentation was how to maintain your GDC Registration. I spoke about what is required to maintain our

registration, and what to do if something goes wrong. Over 2,000 DCPs did not pay their ARF on time this summer: 384 did not comply with Indemnity requirements, and over 1,600 did not submit their CPD correctly, or sufficiently (including 119 dental hygienists and 75 dental therapists).

We have been invited to the next GDC Dental Leadership Network, where Rhiannon and I will contribute to the panel sessions. I also hosted Tom Whiting, the Chief Executive and Registrar, for an afternoon at one of my dental practices where he could learn more about the patient journey when they come to see a dental hygienist. The GDC appears to be working hard to improve their relationship with the profession.

I had the pleasure of joining Thames Valley Regional Group at their study day. It was an engaging and informative day with some great speakers, generous trade friends and delicious refreshments. It has been wonderful to see the Regional Groups be so proactive this autumn and welcome their new regional group team members.

In the interests of sustainability, as well as supporting those who have children starting a new school year, we held this autumn's meetings for the BSDHT Executive and Council teams online. It felt strange hosting my final ever Council meeting online and not being able to see everyone to say goodbye and thank them in person. I am grateful to all of you who support BSDHT, whether by contributing to matters of Council, being active in a Regional Group or Working Group, or by being a member.

Later this month, at the OHC2024, we welcome your new President, Rhiannon Jones, and her new Executive and Council. I cannot wait to see what they have in store for the Society over the next two years.

We will also announce the winner of this year's Member of the Year competition which once again has been supported by KIN Dental. It is such a delight to adjudicate the entrants and to witness their leaflets come to life as the winning entry.

Our conference is also time for you to showcase your own research, or a practice case study, and I am looking forward to reading your entries. Once again, thank you to Colgate for supporting this, to Sharon who organises the entries, and to the judges, Emma Bingham, Marina Harris and Nishma Sharma.

And what is in store for me?

I have taken on some new roles to continue supporting our wonderful professions; as Council Representative for dental hygiene and dental therapy for the College of General Dentistry, and the role of Treasurer for the International Federation of Dental Hygiene.

I do hope to see many of you at the OHC in Harrogate this year, but in case I don't, I would like to take this opportunity to thank all of you for your unwavering support of the BSDHT. It has been my great pleasure to serve you the past few years as Honorary Treasurer, President Elect and as your President. I wish to thank the fantastic team of colleagues and friends who have worked alongside me these past few years, and if you see me out and about and, On the Move, do say hello!

Miranda Steeples

Miranda Steeples

COPY DATES FOR

DENTAL HEALTH

1ST DECEMBER FOR JANUARY ISSUE

The Editor would appreciate items sent ahead of these dates when possible

Email: editor@bsdht.org.uk

1st Annual General Meeting of BDHA held at the Eastman Dental Clinic, London **June 1950**

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BSDHT ANNOUNCES JOINT CONFERENCE WITH THE BSP IN 2025

In 2025, the BSDHT will join forces with the British Society of Periodontology and Implant Dentistry (BSP) to bring together our flagship annual conferences into one very special joint event.

The Oral Health Summit (OHS) will take place at the Edinburgh International Conference Centre (EICC) on Friday 28 and Saturday 29 November 2025 and our aim is to host the largest UK dental conference in 2025, bringing the full dental team together under one roof with a scientific programme that will cater for all. The speaker faculty will include an exceptional line-up of leading global experts keen to share contemporary and novel expertise with the delegates. Furthermore, we are planning a full stream of practical workshops to support and enthuse dental hygienists and dental therapists and their colleagues. As always, the educational programme will sit alongside a large trade exhibition and lots of opportunities for networking and socialising.

"I am delighted to be able to announce this joint educational venture after months of planning and careful preparation. It is our hope that we can offer each delegate the opportunity to learn and network with the people they work with but rarely learn with. With our patients at the forefront of our mind, the chance to learn together and understand how we can work together most effectively, can only be a positive step. It is our pleasure to have designed this event for you and your team and we sincerely hope you can attend this special event."

Rhiannon Jones (incoming President)

Further information will be available soon – in the meantime, we hope you'll save the date for this exciting event and join us in the wonderful city of Edinburgh next year!

READERS FORUM

Happy Birthday Freda!

"Getting old is not for sissies" must be one of Freda Rimini's favourite quotes but reaching the age of 90 with such gusto and sense of humour is what inspired a group of Royal Air Force (RAF) and RAF trained dental hygienists and dental technicians to throw a surprise birthday party for her!

Her commitment to the profession, both inside and outside of the armed forces has been recognised along the way as a recipient of the BEM and then more latterly The Gerald Leatherman Award for her tireless work for the then BDHA. However, it was her personal commitment and friendship that we were there to celebrate at the Royal Air Force Association Club , RAF Halton on the 14th September – afternoon tea and fizz, a fabulous 'This is your Life' presentation impressively pulled together by Karrie Archer and the sharing of memories.

A great afternoon for a great lady. Happy Birthday Freda!!

Dear Friends

I am hoping to instigate a change of law in the UK to limit the sugar content of single-serving foods and drinks to less than the NHS maximum recommended daily amount. As you know, many single-serving items now far exceed this amount.

I am hoping to get the full support of my society, its membership and our dental colleagues.

Please start by signing the petition and sharing with as many of your colleagues, patients and friends as you can. Social media is a really useful place to start.

Petitions that reach 100,000 signatures always get debated in Parliament. We need to start somewhere and at the moment, the sugar industry is winning. One small change might lead to many others...

Here's a link:
https://www.change.org/war_on_sugar_industry

Many thanks
Tim Ives

British Dental Association forges links with BDHA **Membership 150** **Mar 1954**

BY JOANNE BEVERIDGE, ELIZABETH CONNER

UNIVERSITY OF EDINBURGH AND UNIVERSITY OF OSLO EUROPEAN EXCHANGE

In 2018, the BSc (Hons) in Oral Health Sciences programme at the University of Edinburgh was approached by the BSc in Dental Hygiene programme from the University of Oslo regarding a potential student exchange. Initially the team hesitated to agree due to the complexity of the undergraduate clinical, teaching and assessment timetable, but were keen to explore this proposal. The prospect of an exchange for dental hygiene and therapy students was an exciting opportunity for both institutions.

As our programme in Edinburgh runs for four academic years this afforded us more flexibility regarding timings. We decided that the best time to hold the exchange would be in year three semester two. By this stage in the students' training, they have completed their clinical gateway assessments and have experience treating adult and paediatric patients for prevention, periodontal and restorative care. The programme employs a hybrid teaching model and utilises digital teaching platforms, so the students would not miss out on any lectures or teaching materials while on exchange. Furthermore, the dental faculty in Oslo teach their course in English during this semester, which was a consideration in the planning process.

In February 2019 we visited the dental faculty in Oslo to meet the staff and students and delivered a presentation about the exchange and what Edinburgh had to offer. We had a tour of the facility, attended lectures and also had some free time to explore the wonderful city of Oslo. The Norwegian students worked in clinical pairs and were involved in taking and interpretating radiographs on clinic. We were surprised by the lower incidence of disease we observed on the clinics, especially in the paediatric department compared to what we encounter in the UK.

The team from Oslo made a reciprocal visit to Edinburgh in March 2019, where they also delivered a presentation to our staff and students and enjoyed some free to time to explore the city and sample some Scottish cuisine!

We did not anticipate the volume of paperwork and the complexity of planning involved with the exchange, but we set a date for February 2020 for the first exchange. We invited our third-year students to apply and to prepare a short presentation about why they should be considered. Three students applied and all were accepted. Unfortunately, two subsequently withdrew due to personal reasons, and we received no students from Oslo due to a change in their personal circumstances, which was disappointing.

Our first exchange student set off to Oslo in February 2020. We were in close contact during their trip, and happily received many positive reports about the clinical, academic and social aspects of their experience until the COVID-19 pandemic! Unfortunately, our student had to return from the exchange three weeks earlier than expected, which was extremely disappointing for everyone. The pandemic put a hold on any further exchange in 2021 and 2022. Despite this set back, we keenly maintained our links with the team in Oslo.

Exchange 2023

Navigating our way out of the pandemic, we were able to facilitate the exchange in 2023. Once again three students applied - Shannon Netto, Danielle Kite and Sania Jabeen - and all were accepted. Unfortunately, we received no students from Oslo.

The exchange ran from the 31st of January to 31st of March, during which we kept in regular contact with the students and staff in Oslo and highlights of the exchange were posted on our school Instagram page. Again, we received positive feedback regarding the clinical, academic and social experience of the exchange.

Student Experiences 2023

During my time in Oslo, I had the opportunity to gain invaluable experience in various fields of dentistry. I gained extensive hands-on experience by working with patients

directly to refine the techniques I learnt in Edinburgh and enhance my personal communication skills by overcoming language barriers.

A particular highlight was my involvement in a geriatric facility where I had the privilege of treating patients who were approaching the remarkable age of 100 years old. In addition, I had the chance to work with the orthodontic department, where I was introduced to the use of 3D scanners for creating Invisalign impressions. Furthermore, I had a memorable day at a hospital dedicated to the care of chronically ill patients. This eye-opening experience exposed me to the detrimental effects of drug abuse on the oral cavity. Witnessing these effects first-hand has reinforced my commitment to promoting oral health as an integral part of overall well-being. Lastly, I assisted in a surgical palatal expansion procedure in the oral surgery department. These unique experiences allowed me to gain a better insight into the collaboration of different specialties in dentistry and I was very impressed by Oslo's cutting-edge technology which showcased the advancements being made in dentistry. I was also afforded time to practice my restorative skills at their state-of-the-art simulation centre. Overall, my time in Oslo provided me with a diverse range of clinical experiences that have greatly enriched my skills and knowledge as a dental professional.

I felt the city's sense of community when I attended the Ski Jumping World Cup at Holmenkollen. I discovered the Norwegian community valued healthy well-being and I saw how this reflected in their oral health. I adopted this lifestyle by skiing for the first time at the Tryvann Ski Resort which quickly turned into a weekly activity. I even flew to Tromsø – North of Norway - and saw the northern lights at the Finland boarder, snowmobiled alongside glacier mountains and dog sledged. This opportunity benefitted me both professionally and personally and for that I am very grateful.

Danielle Kite (graduated July 2024)
Contact email: **daniellekitee@gmail.com**

My semester abroad in Oslo started with a month of clinical observation, encouraging me to connect with my Norwegian classmates, paving the way for a deeper immersion into Norwegian culture and expanding my academic network. Exploring various departments, such as oral surgery, orthodontics and geriatrics, I discovered a passion for the intricacies of these specialties, opening my eyes to potential avenues in my future career. The cariology classes in Norway proved very beneficial in providing me with a focused approach to studying and therefore understanding.

The emphasis on periodontal health in Norway, with its unique grading system, required me to adapt from my familiarity with the UK system.

Contrary to my initial expectation of an English-speaking semester, I encountered language barriers both in classes and clinical settings. This occasionally hindered clinical interactions, but I took this in my stride and used it as an opportunity to pick up Norwegian dental terms, turning the challenge into a positive learning experience.

Beyond academics, I checked off a bucket list item by witnessing the mesmerising northern lights, an experience made all the more memorable by sharing it with friends. Before flying out, I attended several skiing lessons to prepare me for engaging in the snow sport scene which I thoroughly enjoyed. One discovery, which I'll miss, was the delicious

dessert Lefse, which happily indulged my sweet tooth, (but I refrained from sharing with my patients!)

This semester abroad not only enriched me professionally, providing insights into a different approach to dentistry, but also personally, offering a glimpse into an alternative lifestyle and work-life balance, leaving me with a lifelong memorable experience, as sweet as lefse.

Shannon Netto (graduated July 2024)
Contact email: **svnetto@aol.com**

We arrived at the University of Oslo and were introduced to all the staff and a group of students who were willing to help guide us through our experience there, we had a tour of all the facilities and were shown where to get our scrubs and where we would get changed. During our first few weeks we observed the other classmates in our year and the year below to get a feel for the way it works in a new country as a well as a new university.

When we started seeing patients, we had a Norwegian pair to write our notes for us, as they had to be written in Norwegian. During the first few weeks this made it easy to make friends within the class as everyone was willing to help and really wanted to learn more about us, and vice versa. The most useful clinical experience I found was being able to assist in the periodontal surgery clinics, I was able to observe first-hand all the steps of a bone graft over two surgeries. I was able to ask a lot of questions and was talked through each of the steps and the different kinds of materials used, it was truly a valuable learning experience.

Aside from all the University experience, meeting the other Erasmus students and the Norwegian students was the highlight of the experience, activities included skiing, sledging, weekly bowling and dinners. This made me feel at home and I have made friends I intend to keep for life.

Sania Jabeen (graduated July 2024)

Exchange 2024

At the end of 2023 funding was withdrawn for the European exchange due to Brexit and changes within funding streams, this was really disappointing having re-introduced the scheme after the pandemic.

We were advised that the students could self-fund the exchange, a few of the students were keen, but as this was self-funded it was not ideal on a student budget. We decided it would be sensible to reduce the length of the exchange to help with affordability, while still allowing for enough time for the visit to be worthwhile. We had one student, Jenna Reynolds, who went on the exchange for four weeks during February and March, and for the first time we received an exchange student; Wahta Belay who was in her 2nd year of study in Oslo, below and left, delivered a presentation to the BSc students in the Edinburgh Dental Institute.

Student Experience 2024

When I chose to study Oral Health Sciences at the University of Edinburgh, the opportunity to participate in an exchange was a major factor in my decision. My passion for travel and my desire to gain international experience made studying abroad particularly appealing. The chance to immerse myself in a new healthcare environment and culture was something I had eagerly anticipated.

My third-year exchange to Oslo was truly transformative. It expanded my professional knowledge and allowed me to build lifelong friendships with other exchange students and Norwegian dental students. Daily interactions with specialists including periodontists, oral surgeons, and dental radiologists provided invaluable insights and significantly enhanced my understanding of complex treatment techniques. This hands-on experience reinforced my passion for this field and provided me with new techniques and perspectives that I plan to integrate into my future practice.

Navigating the language barrier was initially challenging, but it became a valuable learning experience. It deepened my appreciation for cultural diversity and honed my skills in cross-cultural communication, which are essential in a global healthcare setting. This challenge improved my ability to interact with diverse patients and colleagues, a skill I will carry forward in my career.

Outside of academics, Oslo's vibrant culture captivated me. As a keen snowboarder, I relished the quick access to excellent snowboarding spots via a short tram ride. Exploring the city's diverse food scene, unique shopping areas and striking modern architecture added to my overall enjoyment. A highlight of my personal adventures was experiencing the traditional sauna and ice bathing in minus 15-degree temperatures, an invigorating and uniquely memorable activity! Additionally, seeing the Aurora Borealis on my way to the airport as I was leaving Oslo was the perfect ending to an amazing experience.

Overall, this exchange has been pivotal in my academic and personal journey. It has reinforced my commitment to pursuing a global perspective in oral health care and inspired me to seek future international opportunities. The friendships I formed and the diverse experiences I gained in Oslo will remain a cherished part of my journey, shaping my future aspirations and contributing to my personal and professional growth.

Jenna Reynolds (year 4)
Contact email: **j.reynolds-7@sms.ed.ac.uk**

Reflections

After several challenges and setbacks, we are delighted to have been able to offer the exchange and work with our colleagues within the dental faculty in Oslo. Both exchange partners have benefited from the experience with some best practice being shared and implemented to improve the student's clinical experience.

As far as we are aware we are the only dental hygiene and therapy programme to run an exchange in the UK. We are proud and pleased to have enriched the undergraduate experience for the students who participated.

Authors: Joanne Beveridge (MClinEd, DipDT, DipDH)

Joanne has now left her role as Senior Lecturer and Programme Director at the University of Edinburgh.

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Elizabeth Conner (BSc PGCAP FHEA) Interim Programme Director/Lecturer:

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Post script

Unfortunately, the BSc (Hons) Oral Health Sciences programme has now been withdrawn due to funding restraints; this means it will not be offered as an option of study at the University of Edinburgh in the future.

Tessa Powell becomes Editor of Dental Health **June 1972**

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BY GYAN KAUR RAJA

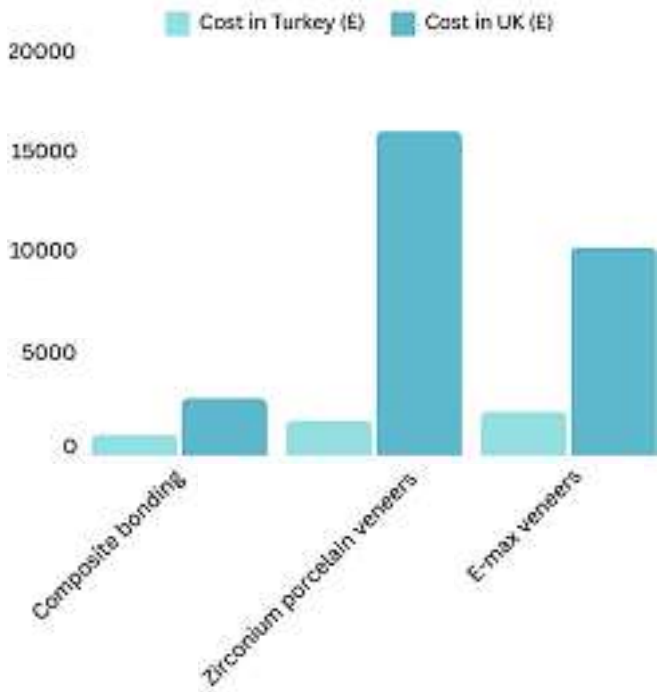
THE GROWING IMPACT OF DENTAL TOURISM

The allure of combining affordable dental treatments with exotic holidays has helped grow a trend in dental tourism in such destinations as Mexico, Thailand and Turkey where procedures are advertised at a fraction of the price of those here in the UK. But while the savings are appealing, what happens when complications arise once these patients return home?

The appeal and risks of dental tourism

The rising cost of dental care in developed countries is the primary driver behind the surge in dental tourism. For example, an implant can cost more than £3,000 here in the U.K., whereas the same procedure in Turkey or Mexico can be up to 70% cheaper. It is easy to see why patients choose to fly abroad for treatment. The graph below compares the costs in GBP of various dental treatments in Turkey and the UK.[1]

But it is not just the financial savings that attracts our patients. Many dental tourists are drawn by shorter wait times and the opportunity to pair their treatment with a holiday. Some foreign clinics capitalise on this by offering all-inclusive packages that bundle treatment with transport, accommodation and even sightseeing tours. However, while these packages are appealing, they also carry significant risks. Hygiene standards vary, follow-up care is often limited and when something goes wrong patients can find it difficult to seek legal recourse.



Dental tourism is likely to continue and it is part of our role to help our patients make informed decisions about their oral health. This includes advising them about the potential risks of seeking dental care abroad guiding them in researching international providers, and asking the correct questions before undergoing treatment to ensure a smooth transition back to local care. It is important also to ensure they are aware of the dangers of travelling too soon after invasive procedures, as air pressure changes or insufficient recovery time could lead to complications.

Managing post-treatment complications

For dental hygienists and therapists, managing complications from overseas treatments is becoming increasingly common. Patients may return with infections, poorly fitted crowns, or substandard restorative work. In these cases, we must operate within our scope—addressing minor issues and referring the patient to a dentist colleague for more complex corrective treatment. According to dentistry.co.uk, 87% of dentists surveyed identified crowns as the most problematic, and 85% agreed implants placed abroad were the most likely to need follow up treatment back in the UK.[2]

Rebuilding trust in local care

One of the biggest challenges posed by dental tourism is the erosion of trust in local dental care. Patients often perceive overseas treatments as more affordable and accessible, which can create a negative view of local dental providers.

While the initial cost of treatment abroad may be lower, the quality of care is not always guaranteed, and complications can end up costing patients more in the long run. Local care, on the other hand, offers the advantage of an established patient-provider relationship, adherence to higher regulatory standards, and better continuity of care. Through

empathetic, non-judgmental conversations, dental hygienists and therapists can help patients appreciate these benefits and make informed decisions moving forward.

Navigating ethical challenges

Dental tourism also introduces ethical dilemmas for dental hygienists and therapists. Many patients may not fully grasp the risks of seeking low-cost care abroad, and when things go wrong, local professionals are often left to manage the complications. This puts us in a delicate position, balancing our duty of care without assuming liability for procedures performed overseas.

To navigate these challenges, it is essential to thoroughly document a patient's oral condition upon their return, provide appropriate care within our scope, and refer patients to a dentist colleague when necessary. Additionally, we must approach discussions about dental tourism with care. Patients may feel defensive about their decision to seek treatment abroad, especially if financial constraints played a role. It is vital that we remain empathetic, offering guidance and support without casting blame.

The growing role of dental hygienists and therapists

As dental tourism continues to rise, dental hygienists and therapists are likely to play an increasingly pivotal role in managing the aftermath of these treatments. Our expertise in preventive care, patient education and post-treatment support is crucial for ensuring that patients maintain optimal oral health, no matter where their initial care took place.

By providing compassionate care and educating patients on the risks and benefits of dental tourism, we can help patients navigate the complexities of their post-treatment needs. Through close collaboration with our dentist colleagues, and a commitment to continuous, high-quality care, we can ensure that our patients achieve lasting oral health—despite the challenges posed by this growing global trend.

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BY **TIM IVES**

CELEBRATING THE GLOBAL IMPACT OF DEDICATED RESEARCH

The invitation from Xlear, a xylitol and oral health company, based in Utah, USA, to attend a surprise event for Professor Kauko K. Mäkinen in Turku, Finland, was unexpected but thrilling. My wife and I had long planned another visit to Finland and the opportunity to honour a pioneer in xylitol research made the trip even more special. We were joined by Trisha O'Hehir, president of O'Hehir University; Shad Slaughter, president of Xlear; Dr. John Peldyak, a close friend and research colleague of Prof. Mäkinen; Dr. Mark Cannon, a paediatric dental expert; and Dr. Lon Jones, known for his ground-breaking work in common-sense medicine. Dr. Jones was particularly significant in this gathering, as he would be presenting the prestigious Jones-Bozeman Award, an accolade that honours transformative contributions to health.

Arriving in Helsinki on a bright August morning, we were greeted by late summer warmth and clear skies. The scenic train ride to Turku, with its lush green landscapes, set a tranquil tone for the journey. The oldest city in Finland, nestled along the Aura River, was a charming blend of history and modernity.

The award ceremony took place in central Turku, in a historic venue filled with anticipation. The Dean of the University of Turku opened with a speech that highlighted Prof. Mäkinen's contributions to science and his unwavering dedication to improving public health. Dr. John Peldyak followed, speaking not just as a researcher who had collaborated extensively with Prof. Mäkinen, but also as a long-time friend. John delved into the technical aspects of xylitol's role in oral health, crediting Prof. Mäkinen's pioneering studies with reducing Streptococcus mutans —the primary cause of tooth decay.[1] He also shared personal anecdotes, painting a picture of him as a mentor and visionary whose work had profoundly impacted those around him. John highlighted Prof. Mäkinen's seminal study published in 1975, which demonstrated xylitol's effectiveness in caries prevention, a ground-breaking finding that laid the foundation for decades of research.[2]

Dr. Lon Jones then took the stage, renowned for his development of xylitol nasal sprays and his holistic approach to health, spoke with the authority of someone who has spent decades at the intersection of medicine and innovation. He shared how his own work in respiratory health had been inspired by Prof. Mäkinen's research into xylitol. Lon highlighted the far-reaching implications of xylitol beyond dental care, noting its benefits in reducing upper respiratory infections—a discovery that has brought relief to countless patients.[3] As he presented the Jones-Bozeman Award, Lon spoke passionately about the importance of integrating natural, scientifically backed solutions into mainstream medicine. The award, he explained, was not just a recognition of Prof. Mäkinen's past achievements, but a testament to his ongoing influence in health sciences.

Prof. Mäkinen's humility and gratitude were evident. He spoke not of his own achievements but of the collective effort behind his successes, thanking colleagues, students and friends.

The next day, we were invited to have a private tour of Turku dental school and university hospital. The dental school, a strikingly modern, round building, was both a listed heritage site and a hub of innovation. Its circular design fostered a sense of collaboration among students and faculty, creating an environment where ideas flowed freely. As we explored, it was clear that the building's design played a crucial role in the dynamic energy we felt.

The university hospital, with its sleek, modern exterior, was a beacon of medical advancement. Inside, the atmosphere was warm and welcoming, with each department represented by an animal - fittingly, the dental department was symbolised by a squirrel. The hospital tour was a humbling experience,

showcasing state-of-the-art facilities and a deep commitment to patient care.

On our third day in Turku, we filmed interviews for Xlear in a local park. The serene greenery provided a perfect backdrop as we shared our reflections on the week's events and Prof. Mäkinen's legacy. Trisha and I highlighted how his work had transformed our professional lives.

Trisha and I also took the opportunity to film in a nearby birch forest for our upcoming course on sugar. The forest, with its tall trees was particularly meaningful -it was from these very trees that xylitol was first derived during World War II when sugar imports were blocked. This simple, natural substance had become the cornerstone of a global dental health revolution, thanks to Prof. Mäkinen's research.[4]

With our time in Turku coming to an end, we embarked on the next leg of our journey - a ferry ride to Stockholm through the world's largest archipelago. The serene beauty of the rocky islands and calm waters provided a peaceful contrast to the bustling events of the past few days. Our time in Stockholm was spent leisurely, exploring the city's historic streets and reflecting on the profound impact of Porf. Mäkinen's work.

As we prepared to return home, I couldn't help but reflect on the significance of our journey. The week in Turku had been a reminder of the power of dedicated research and the global impact one person's work can have. In a supermarket in Turku, the xylitol products outnumbered sweets containing sugar!

Professor Mäkinen's legacy was not just in the scientific advancements he pioneered but in the lives he touched and the inspiration he provided to us all.

Author: When he isn't walking on the beach and photographing wildlife, Tim spends his time teaching, researching, writing and speaking. He developed an interest in sugar and sugar alcohols through his friends at Xlear, his students, his own experience and his research, which was published in the Annual Clinical Journal of Dental Health in 2021 and 2022.

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BY KAREN LIESCHING-SCHRODER

MOUTH CANCER
A SURVIVOR'S VIEWS

As a tongue cancer patient, currently navigating life after surgery and radiotherapy, I am so relieved to finally see some awareness for mouth cancer on a supermarket's toothpastes, mouthwashes and oral hygiene products. It has been a long time coming and this is an incredibly positive move.

The general public still does not know enough about mouth cancer, the signs and the symptoms. I certainly had no idea that my stubborn ulcer was actually cancer, eight years ago.

Dentists, dental hygienists and therapists receive training for mouth cancer screening and many professionals are excellent at performing these essential examinations on their patients, and explaining what they are doing, and why. But we need EVERY dentist, dental hygienist and therapist doing this on EVERY patient! I have never received mouth cancer screening by my dentist and I have no access to a dental hygienist.

The earlier people are diagnosed, the better their chances of a successful outcome and quality of life. In my experience, general medical practitioners (GMPs) are not trained in the same way as dental professionals and just don't know enough about mouth cancer, unfortunately. It is my mission to change this and I use my experience to influence the GMP's and stakeholders in Primary Care in the East of England during our regular meetings. GMP's seem to think this is the sole domain of dentists. I believe that it should be in both domains, but if patients cannot access an NHS dentist, they have to rely on their GMP, which is not ideal.

Today, I am cancer free but have been left with a speech impairment, visual scars and several late effects, including chronic pain in my mouth, that impact my daily living in ways you cannot possibly imagine. Our mouths have so many functions and dictate so much of what we do; eating, drinking, swallowing, breathing, smiling, talking and kissing. The impacts of mouth cancer can be devastating! Awareness of the signs and symptoms, knowing that mouth cancer is very real and affects more and more people every day, is so important. Advertising it on Asda's oral hygiene products is not only reassuring, but so educational for everyone. I hope that other brands will now get involved.

As professionals, I urge you to make your patients aware that mouth cancer can happen to anyone; they don't need to be smokers or drink much alcohol or have HPV. I didn't and I have met so many patients through the Mouth Cancer Foundation who also did not.

I would encourage you all to show your patients how to do a self-examination that they can carry out once a month. Enable them to become familiar with what looks and feels right on their head, neck and in their mouth. Stress to them that they should get in touch straight away if they find anything that lasts longer than three weeks. This is so important! It saddens me to hear that referrals are not going through the system, or are delayed.

Asda is promoting much needed awareness for mouth cancer, so please join in and raise awareness through your dental practices by putting up posters and having leaflets available for your patients. You can get these through the Mouth Cancer Foundation by emailing **info@mouthcancerfoundation.org**

If you have a patient who does happen to get a diagnosis, please signpost them to find support at the Mouth Cancer Foundation. We have a private support group on Facebook - The Mouth Cancer Foundation Support Group. Support for these patients is vital as these cancers are very isolating not only to the patients but also their families.

Thank you, Asda, for a fantastic initiative and helping to save lives!

Contact: karen_l_l_s@yahoo.co.uk

New look for Newsheet **1976**

BY JULIE HANKS

WORKING IN THE FALKLANDS

Ten years ago, I undertook a six-month locum position with Military Medical Personnel (MMP) at RAF Akrotiri, Cyprus. Unfortunately, the Republic of Cyprus does not recognise dental hygienists or dental therapists so, unfortunately, there was no opportunity to go on to work on the island. I have since been employed at RAF Marham, RAF Brize Norton and the Royal Marine Commando Training Centre, Lympstone.

Last August, MMP emailed me about a request they had received for a locum dental hygienist to work in the Falkland Islands for a six-week period. As a dental hygienist in the RAF, we never had the opportunity to spend any time there, although the dental centre was manned by dental officers and dental nurses.

Following an interview via Teams with the two dental officers - surreal as not only was there a six-hour time difference but it was 33 degrees here and -4 in Port Stanley - I was given my date to fly South from Brize Norton in October 2023. My journey took me to Ascension Island and 7,903 miles and 17 hours later I arrived at Mount Pleasant Airfield with the prospect of another one-hour coach journey to Port Stanley.

Valarie Cockell appointed Editor of Dental Health Lyn Jackson now

The dental facility is located in King Edward Memorial Hospital which provides residents of West Falklands, East Falklands and the surrounding islands free dental treatment. It is not unusual for islanders to travel four hours by road and then a further one-hour ferry crossing to access dental and medical treatment. Dental staff need to be mindful of this and undertake dental assessments and treatment alongside other medical needs on the same day, wherever possible. Needless to say, appointment times frequently over run, but islanders are aware of this and are grateful for the services provided at the hospital.

According to the latest census, the Falkland Islands have a population of 3,662 over an area of 12,200 km. Port Stanley on East Island is the capital. The islanders are mainly British with a large number migrating from Saint Helena, Chile, Zimbabwe and The Philippines. The most common language is English (89%) then Spanish (7.7%) and a few others (3.3%).

Challenges

When I arrived, the islands had been without a dental hygienist for some time, but not through lack of trying to recruit one. As soon as my flight was booked, social media ignited with the news that the long-awaited dental hygienist was inbound! My appointment book was full before I landed!

On my first day I quickly realised that I was not going to be able to complete treatment plans as most of the patients presented as direct access. Furthermore, it was unclear how long it would be before a dental hygienist or therapist would be appointed to a permanent post to ensure continuity for these patients. I spent my first day assessing what messages were getting across to patients and identifying the obstacles to patients adopting good oral hygiene practices.

Oral Hygiene Products

Due to the location of the Falklands most of the supplies to the few shops are limited and either arrive by boat or by air via Chile and if there is adverse weather this can be sporadic. There are three main shops in Port Stanley. There are no pharmacies other than in the hospital. The choice of dental sundries is therefore very limited: two different brands of adult manual toothbrush and one child's was available. The latter was aimed at children five years and under so many that were older, or were not interested in that particular 'character,' were using the very large headed toothbrush.

I had more 'success' with electric toothbrushes in the electrical store - there were three from which to choose. Not three different products but three toothbrushes in total and no replacement heads in sight! I did travel with my trusty Oral B test drive and plenty of heads so hoped that many patients had previously bought an electric brush from the now depleted electrical shop. Unfortunately, Amazon will not deliver to the island so the

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only option was via a favour if someone was returning from the UK.

Furthermore, I soon discovered there was no adaptor available. I tried all the outlets, the aforementioned electrical shop and the DIY shop but no one sold them. A favour from someone inbound from the UK was again the only answer. Thankfully a plea on Facebook helped me locate one for the duration of my post.

However, mouthwash was in abundance! Every variety apart from alcohol free. I witnessed someone in the 'supermarket' with a dozen bottles!

Diet

In the Falklands the cost of living is three times that of the UK, wages are low and the majority of supplies are shipped in every six weeks. Consequently, some foods are in short supply. When I arrived on the island there had been no tomatoes for eight weeks. Fresh fruit and vegetables are scarce unless you grow your own, but the inclement weather makes this tricky. When the shipment does arrive, a Facebook message is sent. One day the call was that bananas had arrived. The ensuing queue resembled the days of rationing! Most meals are processed or frozen ready meals, with inflated prices. Sadly, the confectionary aisle was much larger than the fresh fruit and vegetable aisle.

Oral Hygiene

Due to a sporadic dental recall system the majority of the islanders are seen on a 'needs' basis: pain, request for after school visit, care home dental visit, requesting a 'clean', loose teeth, missing teeth or teeth replacement. The dental officers that are employed from overseas, including the UK, are only contracted for two to three years so the majority of their time is taken up with this kind of treatment. Few residents book their examination every six months, or as advised.

In Port Stanley, 11% of the population speak very little or no English. The language barrier was difficult with my Spanish limited to, "Hola" and "gracias". The level of understanding of the importance of good oral hygiene in conjunction with overall health, the ability to eat pain free, social acceptance and speech, was limited. I therefore found myself improvising with my trusty notepad, coloured pencils and Google translate to try and get important messages across.

Prevention

I was lucky enough to be involved in Fluoride applications in the schools. I was invited to the after-school science club to talk about the importance of fluoride and visit the wonderful assisted living house to educate the carers in promoting good oral hygiene regimes with the residents.

The big mantra that I wanted my patients to take from my time in the Falklands was, spit don't rinse! I was acutely aware that I could not personally change the produce in the supermarkets, ask for more toothbrushes to be on sale in the electrical shop, ask Amazon to start delivering to the islands or even persuade all our wonderful trade colleagues in the UK to send me free toothpaste samples whilst I was there. However, I do hope I have applied a 'sticky plaster' in my short six weeks and hope it will last until the permanent position is filled.

My Memories

The Falklands are a wonderful set of islands, with so much history. We can never forget Argentina's invasion in 1982. Their forces landed on April 2nd to occupy the Islands known to the Argentinians as The Isla Malvinas. On June 14th 1982 the Falkland Islands were handed back to British control with the loss of 649 Argentinian military personnel, 255 British military personnel and three Falkland islanders. I clearly remember this as a young girl awaiting to enlist into the RAF. It was therefore surreal to see some familiar names.

I climbed Mount Tumbledown; I saw Fitzroy Bay where two of our boats were attacked and sunk with a huge loss of life; I saw the prominent bronze bust of Margret Thatcher to whom the islanders are still eternally grateful; and, of course, the amazing wildlife. I had a fantastic time sitting amongst the Emperor penguins and their inquisitive, fluffy chicks with no one around apart from my local guide: Rockhopper penguins are hilarious! I loved the beautiful white sandy beaches, aqua blue waters with the odd elephant seal basking in the sun. I was invited to so many events and dinners, including at the Governors house, barbeques and quiz nights. I was made to feel so welcome and everyone was so grateful for my services. If I was a little younger, I may have been tempted to accept the permanent position.

If anyone is interested, there is a vacancy for a dental hygienist or dental therapist. Please email me and I will forward you the contact details.

Author: Julie qualified as a dental hygienist with the RAF in 1988. She served for several years, including tours in Lincolnshire, Cyprus and Cornwall. Julie worked in both private practice and the oral surgery department In Lincolnshire Health Trust, before moving to Cyprus.

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BY LOUISE HARRIS SMITH

COLLABORATIVE CARE FOR CHILDREN IN CARE

Delegates at last year's BSDHT OHC in Bournemouth may remember a slightly overexcited pair from the local Integrated Care Board, NHS Dorset, asking questions about children in care (aka looked after children) and their access to dental health care. We were overwhelmed with not only your responses and willingness to talk, but also your level of compassion towards the children you treat. Thank you for sharing your experiences with us!

We came away from your conference buoyed up with enthusiasm and determined to make a difference for our children in care. You'll note I write 'our' children; this stems from the need to include children in care under our corporate parenting umbrella. I like to think of it as providing for these children the care and services we want for our own children, and nothing less.

Background

Children in care often enter the care system from a background of neglect, resulting in having poorer physical and mental health than their peers.[1] They also have relatively high levels of untreated morbidity, due to adverse childhood experiences (ACEs).[2] In studies by Muirhead (2015)[3] and McMahon et al (2018)[2] children in care were identified as more likely to have dental decay and have more teeth filled or extracted than their peers. McMahon's study (2018) found that children in care have double the rates of urgent dental treatment and are half as likely to attend dental services as the general child population. In addition, as dental decay is readily preventable, urgent dental care needs in children are also a marker of failure of preventative care services, or poor use of those services as they are more likely to miss a dental check or not complete a treatment.

For some children in care, the experience of an oral health check can trigger previous trauma, meaning extended appointments are required. However, many dental practices find this difficult to accommodate with rising patient lists and fewer NHS dentists.

When children are taken into care by their local authority, a review of their health is a requirement and oral health is part of this. At the initial health assessment (which needs to take place before the first 'children in care review' one month into care), it is usually recommended that children and young people are supported by their foster carer or social worker to access a dental check. This can prove difficult when lists are closed to NHS patients and has led to health and social care teams contacting individual practices in the hope of finding availability. Further challenges arise when, inevitably, placements and locations are changed for these children.

An opportunity to improve services

Through my role as designated nurse for children in care and care experienced young people, I have regular contact with children in care health and social care teams. Colleagues in these teams have raised their concerns that children in care were unable to access a dental appointment. Locally, rates of health reported data for children in care up to date with a dental check had declined by 15.5% since 2019. It is apparent that there is a growing cohort of vulnerable children without access to dental services. As a southwest region of designated nurses, we had highlighted the issue nationally, however when delegation of dental services moved to Integrated Care Boards, an opportunity arose to think about how we could improve services locally.

In a bid to highlight the specific needs for children in care to local dental commissioners, an evidenced based brief paper was written and presented, mainly posing suggestions around whether children in care should be prioritised for dental care, based on the studies previously mentioned.

This coincided with a scoping project[4] in the southwest region in England around the scale of need for not just children in care but care leavers too. The review of the studies indicated that, although children in care and care leavers had higher treatment needs, they experience more difficulty in accessing dental services than their peers not in care. A mixture of factors such as psycho-social, logistical and organisational have a significant impact on this.

Care leavers, who often prefer to be known as care experienced, are young people who have previously been in care for a period of time and have left when their care order ends at age 18 or returned home prior to this. Their needs and health inequalities are starting to be recognised. Children in care and care leavers are mentioned as one of

BDHA Publications Committee is formed Sue

the target population groups in the NHS England approach to support the reduction of health inequalities, Core20PLUS5,[5] with oral health being one of the five clinical areas of focus, aiming to reduce tooth extractions due to decay.

Concurrently the Southwest Paediatric Managed Clinical Network began developing a service specification to support the commissioning of oral health services in ICBs for children in care and care leavers.

Children in care and care leavers were starting to be recognised as a targeted population in Dorset, alongside the other transformation of flexible rapid commissioning and urgent stabilisation, ideas were being developed as to how we could address the gaps in NHS dentistry to ensure children in care were able to access not just one assessment appointment but also any follow up treatment needed. Suddenly I was part of a workstream outside the safety of my safeguarding team. This move was energising and empowering as I realised that I could be part of making the difference for the children about whom I feel so passionately.

Collaborative care

The innovation of paying a 'child in care premium' to practices willing to offer appointments to those children in care who do not have a dentist has been welcomed by health and social care colleagues as a solution to the time taken ringing around practices trying to find an available space. Expressions of interest are currently out to dental practices in

IMAGE COURTESY OF PIQSELS

Dorset, with the requirement that trauma informed training forms part of the agreement. This is vitally important as the first contact a child in care, or care leaver, has at their dental practice will shape not only their view of visiting the dentist but also their acceptance of ongoing treatment and oral health promotion. The Fifteen Steps Challenge[6] developed initially for inpatient healthcare settings, is a suite of toolkits designed to explore the patient experience based on their first 15 steps into the surgery, clinic or practice. It is increasingly being linked to embedding trauma informed and attuned care in understanding what good quality care looks like.

However, increasing access to dentists for children in care can only be one part of the solution in alleviating disparities. Conversations with dental experts at last year's BSDHT OHC and locally with the network, about our children, demonstrated a high level of compassion but also identified opportunities to develop cultural competence and understanding as to why these children should be prioritised by their dental practices. Not only is there is a clear need for early and continuing oral hygiene and education, but there are fantastic opportunities ahead for everyone to work together to achieve this.

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The Editor of Dental Health is co-opted onto BDHA Council New design and

BY ERICA FERRAR

THE COHERENT PROFESSIONAL

The work of a dental hygienist and therapist is rewarding, yet incredibly demanding with a range of stressors impacting our physical, mental and emotional wellbeing. All clinicians need to develop strategies to build, strengthen and sustain personal and professional resilience in order to thrive in our chosen profession.

We all have our own set of unique stressors in our personal lives to contend with, relationship, financial, childcare, family or health concerns. We also have a whole set of professional stressors to manage, which can lead to job dissatisfaction, overwhelm and burnout. These may include:

- **Physical Strains** – musculoskeletal issues arising from awkward postures and repetitive movements can result in inflammation and pain in the back, neck, shoulders, arms and hands.
- **Mental and Emotional Strains** – Challenging, anxious and fearful patients can cause us mental and emotional fatigue.
- **Time Constraints** – Due to tightly scheduled appointments.
- **Lack of Nursing Support** – With an ever-increasing workload, lone-working clinicians are finding it increasingly difficult to manage appointments, creating a sense of isolation and frustration.
- **Fear of Litigation** – A very real threat that can impact the way that treatment is carried out for fear of making an error or not meeting patient expectations.
- **Increasing Demands** – Keeping current with evolving technologies, an expanding scope of practice, meeting CPD requirements, alongside attending to the needs of patients can all contribute to feelings of overwhelm and burnout.

In our demanding profession, it is critical to find ways to build and strengthen both personal and professional resilience in order to foster long-term wellbeing and career satisfaction.

As a Certified HeartMath Coach, I use the concept of Coherence using Heart Rate Variability (HRV) measures as a key tool for managing stress and building, strengthening and sustaining resilience.

Understanding how coherence works and learning techniques to support coherence, can have a profound impact on stress management, emotional regulation and the wellbeing of the practitioner and the patient and can offer considerable benefits that enhance both personal and professional effectiveness.

Understanding Coherence

Coherence is the optimal state where physiologically, the nervous system, hormonal and immune systems are working together in energetic balance, together with the alignment of the heart, mind and emotions. Coherence is the ultimate in achieving homeostasis. It is the state of optimal functioning, increasing energy and expanding our emotional awareness, giving us greater control over our actions and reactions, especially in challenging situations. Understanding coherence is a key indicator in taking responsibility for our own wellbeing.

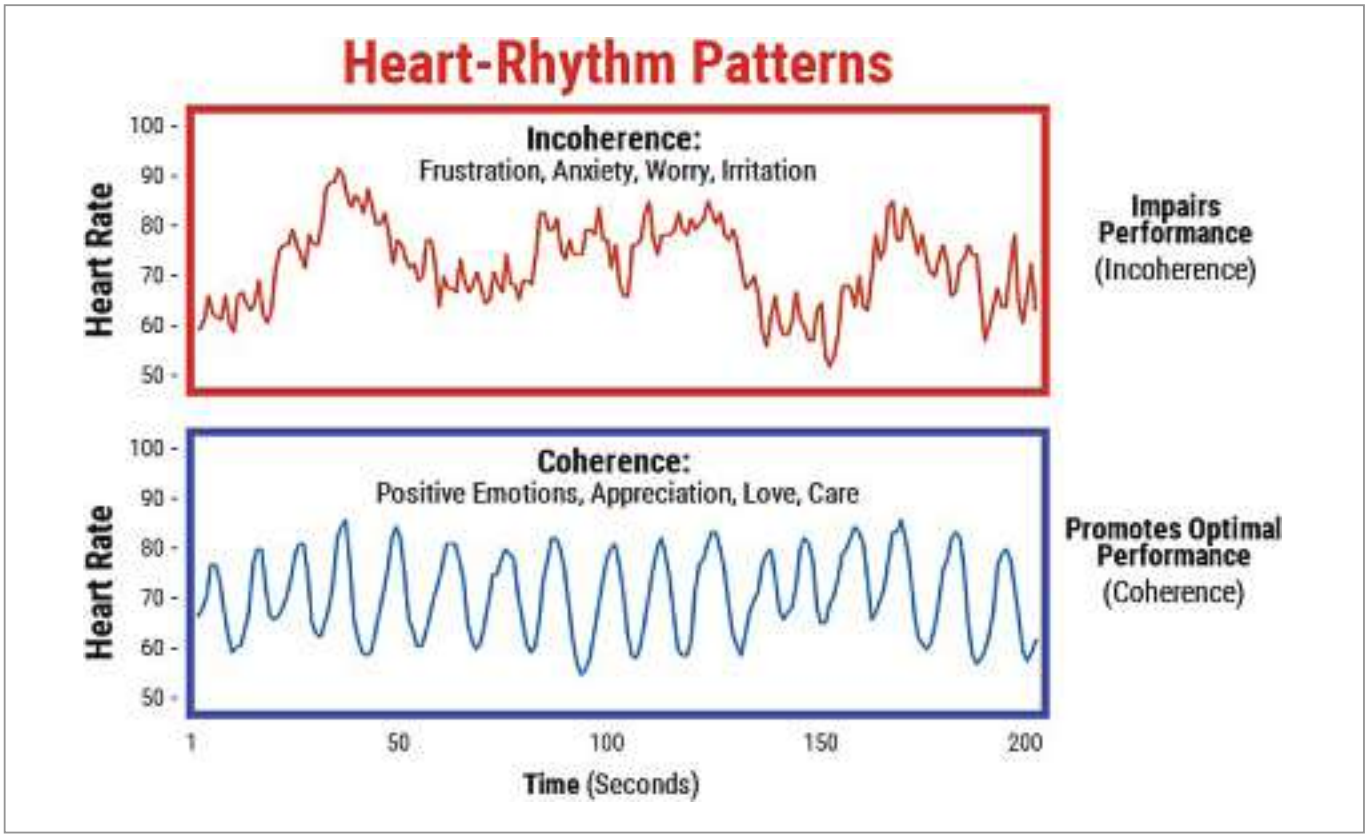
Coherence is measured by analysing Heart Rate Variability (HRV), i.e. the variation in consecutive beat-to-beat changes that create our heart rhythms. This HRV pattern reflects the balance between the sympathetic (stress) and parasympathetic (relaxation) branches of the autonomic nervous systems (ANS). High HRV, where the two branches of the ANS are working in harmony, indicate good overall health and high levels of physical, mental and emotional flexibility. This measure tells us that the body can switch readily from a state of rest to a state of high alert, and back again, when necessary, with no lasting effects.

Conversely, low HRV where the sympathetic branch of the ANS is in charge, indicates potential health issues, chronic stress, and lower levels of adaptability to challenges.

Research at the HeartMath Institute found that there was a distinct correlation between HRV and emotional states.[1] Further inquiry found that positive, renewing, and uplifting emotions such as love, appreciation and compassion created smooth, harmonious, and *coherent* heart rhythm patterns, or waveforms, whereas negative, depleting emotions such as anger, frustration and impatience created disordered and jagged incoherent waveforms (Fig. 1).[2]

It is this interconnection between HRV, coherence and emotional regulation that provides a comprehensive framework that can support DH and DT in managing stress more effectively, improving health outcomes and enhancing job satisfaction.

Figure 1: **HRV patterns in relation to emotional states. Courtesy of HeartMath UK & IRL**



HRV is measured using a biofeedback device that records in real time exactly how our heart rhythms are responding to its current emotional environment, and it is possible to view, in real time, as simple emotional regulation breathing techniques transform heart rhythms from an incoherent to coherent pattern.

Emotional Regulation Techniques

These are two simple HeartMath emotional regulation techniques that can be employed to transform HRV patterns from incoherent to coherent. These methods can be used when feeling stressed or anxious, in the moment, although it is always a good idea to start to utilise these techniques at strategic points throughout the day so that the baseline measurement can be strengthened and resilience potential increased.

1. Heart Focused Breathing

STEP 1 – Focus your attention in the area of the heart.

STEP 2 – Imagine your breath is flowing in and out of the heart or chest area, breathing a little slower and deeper than usual.

Suggestion - Breathe in for the count of 5 and breathe out for the count of 5 – or whatever rhythm is comfortable.

2. Quick Coherence

STEP 1 – Focus your attention in the area of the heart.

STEP 2 – Imagine your breath is flowing in and out of the heart or chest area, breathing a little slower and deeper than usual.

STEP 3 – Make a sincere attempt to activate and experience a positive renewing feeling such as care, compassion or appreciation for someone or something in your life.

E.g. Try to experience the feeling you have for someone you love, a pet, a special place, or focus on a feeling of calm or ease.

Start these practices at just 1-2 minutes and increase as you become more familiar and experience the benefits.

These techniques are really useful in taking the charge out of a situation and can help you to start to shift into a more resilient

Figure 2: **Biofeedback print out**

state. It draws your attention away from your distressed thoughts and feelings. By interrupting the body's mechanical response to the stressor, you can begin the process of returning your nervous system back into balance, which is reflected in more coherent heart rhythms.

Benefits of Coherence

Achieving a state of inner coherence is essential for clinicians. There are myriad benefits, including:

- Stress Reduction - by increasing physical, mental and emotional flexibility, we can remain centered and composed even in the most challenging situations, reducing the output of adrenaline and cortisol and increasing the release of DHEA and oxytocin.
- Reduced physical strain – promoting a feeling of ease and calm can reduce muscle tension and pain. By incorporating coherence techniques throughout the day, DH and DT can develop greater body awareness and learn to release tension before it becomes a chronic problem.
- Enhanced focus and cognitive performance – increased coherence has been shown to optimise brain function and improve focus, decision-making, problem solving and memory. This is highly beneficial to clinicians when needing to concentrate without becoming distracted or fatigued.
- Improved communication – creating calm, empathetic and respectful communication skills can improve the relationship between clinician and patient, resulting in increased trust and better treatment outcomes
- Improved energy regulation – Being in a balanced, centered and coherent state renews energy and prevents against fatigue and exhaustion.
- Improved emotional regulation leading to better patient care. Increasing our awareness of how we are feeling in any given moment helps us to self-regulate. This is useful when dealing with challenging or anxious patients where we can shift from a depleting state of frustration into a renewing feeling of empathy and compassion. This benefits both the clinician and the patient, igniting a feeling of trust and respect instead of anger and irritation.

Conclusion

Patient care lies at the heart of our work. However, the demands of the job can result in less-than-optimal care and interactions with our patients, causing strained communications, misunderstandings, impatience and reduced empathy, especially when dealing with the challenging, anxious and fearful patient.

We need to be functioning from a healthy, coherent state, fostering a sense of calm and focused mental clarity. This is where we do our best work, from a place of compassion and empathy. We can communicate clearly and concisely, remain emotionally stable and make better decisions regarding our patients, all whilst protecting our own wellbeing.

HeartMath's coherence techniques offer a powerful way for dental hygienists and therapists to manage their own wellbeing. By becoming more aware of how you are feeling in the moment, you are better able to manage the challenges of the job without becoming overwhelmed, remaining physically, mentally and emotionally more resilient. This can pave the way to building an increased sense of job satisfaction and developing a greater sense of purpose in your role.

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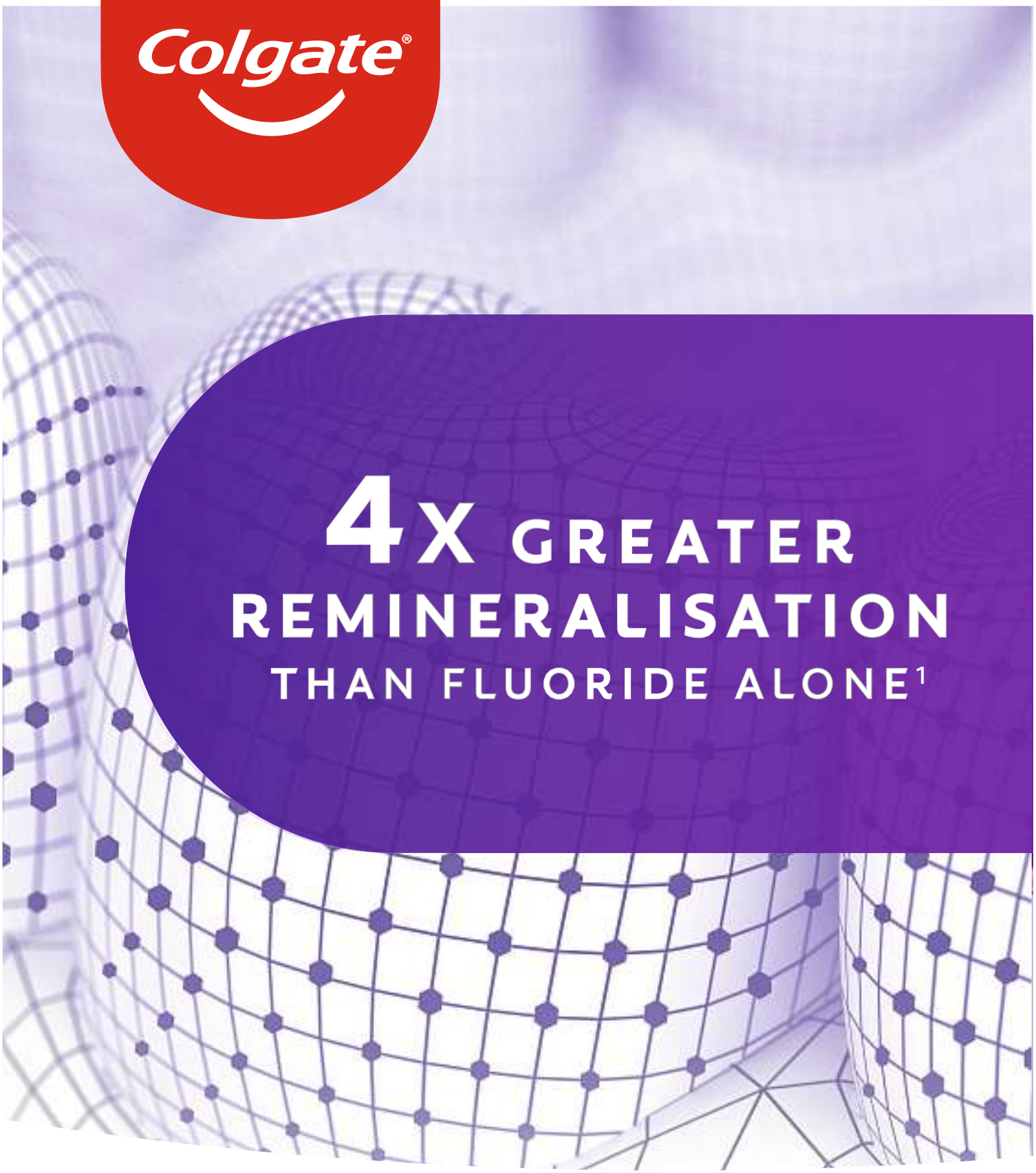

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TRAINING RESIDENTIAL HOME CARERS IN PORTSMOUTH BASELINE ASSESSMENT OF CARERS' ORAL HEALTH AWARENESS

Bhavin Dedhia, Latha Davda, Kenneth Eaton

AIM

The aims of the project reported in this paper were to:

Investigate the effectiveness of oral health care training for care home staff using the Public Health Education (PHE) oral health care toolkit for care homes and intraoral cameras.

The first stage was to assess carer's oral health knowledge and awareness before any training was provided.

LEARNING OBJECTIVES

Readers should be able to:

- Gain an understanding of the level of oral health knowledge of carers in two residential homes in the south of England.
- Gain an understanding of how this can be assessed prior to the provision of training by dental therapists or dental hygienists.

LEARNING OUTCOMES

To understand:

- How to assess carers' oral health knowledge and oral health practices.
- Their level of level of oral health knowledge.
- The importance of making such an assessment prior to providing oral health training.
- The demographics of carers working in residential homes.

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Introduction

In 2021, A national survey found that 278,946 people aged 65 years or older were residents in care homes in England and Wales and that 70.9% were *disabled with day-to-day activities limited, a lot.*[1] Two years earlier the Care Quality Commission published *Smiling Matters, a review of oral health care in care homes.*[2] It suggested that oral health care in care homes was often poor and needed improving. In response, in 2020, NHS England and NHS Improvement published a *Framework for Enhanced Health in Care Homes*[3] *and an Oral Health Toolkit*[4] was produced. It includes training materials, templates and links to publications and consists of five sections. One of which includes training slides, a manual with further information, recorded webinars and a catalogue of online videos to support oral health training.

In 2023, dental hygienists/therapists(DH/T) students from the University of Portsmouth's Dental Academy, visited two residential care homes in Portsmouth to train carers using the oral health toolkit[4] in the use of intraoral cameras, as part of a planned teledentistry project. Teledentistry involves the use of information technology such as video conferencing to facilitate remote dental screening, guidance and education.[5] Teledentistry is not a new concept and has been used to deliver distant orthodontic advice and treatment planning from the University of Bristol's Dental School to patients in West Cornwall for more than 20 years.[6] It has been used to link university dental clinics to care homes.[7] During the COVID-19 pandemic, access to dental care was difficult for care home residents and if the facilities were already set up, this may have provided the care needed.[8] A proposal was made to pilot videoconference links from the University of Portsmouth Dental Academy to the care homes in the Portsmouth area.

Before any training was provided, the carers were required to complete a baseline questionnaire to assess their oral health awareness. This article reports the results of this assessment. A second article will describe the DH/Ts experiences whilst providing oral health and teledentistry training for the carers in the two care homes.

Aims

The aims of the project were to:

Investigate the effectiveness of oral health care training for care home staff using the Public Health Education (PHE) oral health care toolkit for care homes and intraoral cameras.

The first stage was to assess carer's oral health knowledge and awareness before any training was provided.

KEY WORDS

Residential Homes, Carers, Oral Health Knowledge

ABSTRACT

Aim

This article aims to describe how a pre-training (baseline) assessment of the oral health awareness of carers in two residential care homes in Portsmouth was performed and its results.

Methods

After obtaining ethics approval for the project from the University of Portsmouth, two Portsmouth care homes with a total staff of 55 carers agreed to take part in a study which involved three dental therapy and dental hygiene students providing training in oral health care and the use of intraoral cameras to the carers. The carers' baseline oral health knowledge was assessed using a questionnaire with 44 closed questions, adapted from one used in a previous study. The questions investigated: oral care provided to residents by the carers; knowledge of the importance of oral health for good general health; knowledge of common oral diseases/conditions in older people; management of residents' oral health care; confidence in providing oral health advice and care to residents. It also asked about the carers' personal details, including: age; gender; years of employment as a carer and length of current employment; previous training in oral health care and use of intra oral cameras; personal oral hygiene regime; and beliefs about oral care.

Results

Forty carers completed the questionnaire but not all questions were answered by all of these carers. Their average age was 39.5 years and they had worked as carers for an average of 9.5 years. Of those who answered the relevant questions, 26% were male and 38% did not have English as their first language. Their oral health knowledge was generally fair and 38% reported that they had received oral health care training previously. Thirty percent reported that they used a powered toothbrush and 73% that they performed interdental cleaning in their mouths.

Conclusion

The results of the study informed the oral health care and use of intraoral camera training which was subsequently provided. They provide a useful insight into the oral health care which was provided at the two care homes and of the centres' carers' demographic profile. However, they cannot safely be generalised to other care homes.

Methods

Prior to the commencement of the study, the owners of the two care homes in Portsmouth agreed to take part in the teledentistry project. It was given ethics approval by the University of Portsmouth's Research Ethics Committee. In each of the care homes the manager was provided with hard copies of a participant information sheet and of a questionnaire, based on one which had been used successfully in a previous study in Kent, Surrey to assess carers' oral health knowledge and awareness.[5] For the current study, additional questions were added to analyse the knowledge and competence of carers in the use of intraoral cameras. The managers distributed the participant information sheet to members of their care staff and gave the questionnaire to those who agreed to take part. Completed questionnaires were returned to the managers and kept in a locked draw until they were collected by the investigator (first author BD) who analysed them and produced a large Excel file of all the answers.

The questionnaire had 44 mainly close ended questions which addressed:

- Oral care provided to residents by the carers **(questions 1 -3)**
- Knowledge of the importance of oral health for good general health **(questions 4 – 6)**
- Knowledge of common oral diseases/conditions in older people, including dental caries, periodontal diseases, oral ulcers, xerostomia, diet, PEG feeding etc. **(questions 7 – 22**)
- Management of residents' oral health care **(questions 23 – 26)**
- Confidence in providing oral health advice and care to residents **(questions 27 – 29)**
- Carers' personal details, including age, gender, years of employment as a carer and length of current employment **(questions 30 to 35)**
- Previous training in oral health care and use of intra oral cameras **(questions 36 – 39)**
- Personal oral hygiene regime and beliefs about oral care (questions 40 – 44)

Results

A total of 55 carers were employed either full or part time in the two care homes. Of these, 40 completed the questionnaire. However, some did not answer all the questions. The results are presented in tables 1-8.

Discussion

This discussion comments on the results from each of the eight sections of the questionnaire. Where possible this discussion compares the results with those of carers in Kent, Surrey and Sussex in 2014[5] and hospital nurses in 2020[6] and then describes the limitations of the study and suggests that teledentistry will be a feature of dental hygienist and therapist practice in the future.

Oral care provided to residents by the carers

It was encouraging to see that 35 (87%) of the carers reported that they did clean residents' mouths and dentures. Only 11 gave reasons as to why they did not like working in other peoples' mouths, of whom 8 reported that they did not like the smell. In contrast only one carer in the Kent, Surrey and Sussex (KSS) study[5] and only 3% of hospital nurses[6] reported that they did not like working in other peoples' mouths.

Table 1: Oral care provided to residents by the carers

1. Do you clean residents' mouths?	
Yes	35
No	3
No answer	2
2. Do you clean residents' dentures?	
Yes	35
No	2
Residents clean them	1
No answer	2
3. If you do not like working in other people's mouths please explain why	
I don't like the smell	8
I might be bitten	3
I don't like cleaning my own mouth, so I am not going to clean other people's	0
No answer	25

Knowledge of the importance of oral health for good general health

It was also encouraging to see that 38 (95%) of the carers understood the need to clean teeth, gums and dentures, at least twice per day, including last thing at night. This percentage was slightly higher than was found in the KSS study.[5] The Portsmouth carers were much more aware than the KSS carers of the risk of residents developing acquired pneumonia due to bacterial build-up in poorly cleaned or uncleaned mouths. Thirty (75%) of the Portsmouth carers were aware of this risk, as opposed to only 25% in the KSS study. The hospital nurses were not asked these questions.

Table 2: Knowledge of the importance of oral health for good general health

4. Do you know why it is important for your own general health, as well as that of your residents, that mouths (teeth, gums, tongues, dentures) are kept clean? Particularly for those who are unable to adequately clean their own mouths?	
Because build-up of bacteria in the mouth can lead to pneumonia	30
Because a dirty mouth is a smelly mouth	28
Because a dirty mouth can lead to tooth decay and pain	29
Because a dirty mouth leads to bleeding gums	26
Because a dirty mouth may lead to gum disease and loose teeth	33
Because a dirty mouth can limit the enjoyment of food	4
Because CQC says so	1
No answer	1
5. How frequently should teeth, gums and the tongue be cleaned thoroughly ?	
Twice a day, including last thing at night	38
After each meal	1
No answer	1
6. How frequently should dentures be cleaned?	
After each meal	21
Last thing at night and kept in a labelled pot overnight	17
When the mouth starts to smell	0
Don't know	2

Knowledge of common oral diseases/ conditions in older people

With the exception of awareness of the number of deaths in their care home from acquired pneumonia, management of Pericutaneous Endoscopic Gastrostomy (PEG) fed residents and a mistaken view that tea and coffee were adverse factors for good oral health, the Portsmouth carers reported that they had good knowledge of common oral diseases and conditions in the mouths of older people. Seventy five percent were aware of the recommended frequency for toothbrushing. Over 85% had satisfactory knowledge of: the causes and management of dry mouth, the significance of painless oral ulcers, which had been present in a mouth for more than 14 days and the need for urgent referral, and the role of plaque in dental caries and gingivitis. With the exception of PEG feeding, for which 15 (34 %) of the KSS carers reported that they had cleaned the mouths of PEG fed residents[6], the knowledge of common oral diseases and conditions in older people of the KSS carers was similar to that of the Portsmouth carers. The hospital nurses were not asked about numbers of deaths from acquired pneumonia or the management of PEG fed residents and patients. Nevertheless, of the hospital nurses, 89% reported that they were confident in recognising dry mouth, 78% in recognising oral thrush but only 14% in recognising mouth cancer.[6]

Table 3: Knowledge of common oral diseases/ conditions in older people

7. Which of the following may cause dry mouth ?	
Taking medications which depress the production of saliva	34
Salivary glands are less efficient because of age	32
Sleeping with mouth open	25
Sjögren's syndrome	6
Talking too much	6
Dehydration due to insufficient intake of liquids	21
Don't know	1
No answer	2
8. Which of the following should you provide for residents with dry mouths ?	
Drinking water frequently during the day and night	35
Saliva replacement gels, toothpastes, mouth washes and sugar-free gum	23
Non-sugar containing anti-plaque mouthwashes for dry mouths	21
Twice daily tooth, gum and tongue cleaning	17
Leaving dentures out at night	17
Don't know	1
9. For residents who require help do you clean their teeth, gums, tongue and dentures?	
Yes, twice per day	30
Yes, once per day	7
Never	1
After meals and medication	1
No answer	1
10. Are any of your residents fed through percutaneous endoscopic gastrostomy (PEG) ?	
Yes	2
No	30
Don't know	3
No answer	5
11. How often should you clean the mouths of PEG fed residents?	
At least twice per day	4
Once per day	2
Never	1
Don't know	2
No answer	31
12. Do you know how many residents in the care home died of pneumonia in the last 12 months?	
Yes	2
No	21
No answer	17
13. How many died of pneumonia in the last 12 months?	
Only one carer answered this question and the number of pneumonia deaths at their care home, in the last 12 months, was 5.	
14. Do you know that the most frequent cause of deaths from pneumonia in care homes and hospitals arises from microbes in the mouth ?	
Yes	10
No	12
Don't know	13
No answer	5
15. If one of your residents has a painless ulcer in the mouth for more than 14 days, what should you do?	
Nothing	0
Arrange for them to be seen by a dentist	36
Don't know	3
No answer	1
16. Why should painless ulcers in the mouth be checked?	
Because the ulcer may be part of a more serious infection such as Syphilis, TB, Herpes	12
Because persistent and painless ulcers may be due to early cancer	30
No answer	5
17. Which of the following may cause tooth decay ?	
Genetics	13
Bacteria in the mouth	37
Sugars	24
Poor tooth brushing	36
General diseases such as diabetes, strokes, etc	22
Don't know	2
No answer	1
18. Which of the following are the two most important factors in preventing tooth decay ?	
Brushing all tooth surfaces twice per day using a fluoride toothpaste	39
Restricting sugar consumption to mealtimes only	23
Seeing a dentist regularly	37
Changing your toothbrush regularly	27
Don't know	0
19. Which of the following are the two most important factors that lead to bleeding gums ?	
Genetics	8
Poor diet	11
Build-up of bacterial plaque where the tooth and gum meet	35
Poor cleaning of the area where the tooth meets the gum	39
Don't know	0

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SWALLOW

20. How can gum bleeding be prevented ?	
By excellent cleaning between the teeth and where tooth and gum meet	34
By rinsing the mouth with salt and water	14
By eating plenty of fibrous food	5
By seeing a dental hygienist regularly	32
Don't know	0
21. Which of the following can be detrimental to teeth and gums?	
Milk	0
Fresh vegetables	3
Sugar	34
Coffee	22
Tea	14
Sweets	29
Smoking	32
Substance abuse	29
Alcohol	31
Fresh fruit	9
22. When is the most important time to brush teeth and gums?	
Before breakfast	9
After breakfast	16
After lunch	4
In the evening before going to bed	34
Don't know	0

Management of residents oral health care

KSS carers and hospital nurses were not asked about numbers of referrals to dentists. Only 10% of the Portsmouth carers answered this question. In retrospect it would have been better to put this question to the care home managers. Only 10% of the Portsmouth carers reported that it was not easy for residents to obtain oral health aids such as toothbrushes. In contrast 30% of hospital nurses reported this problem.[6]

Confidence in providing oral health advice and care to residents

Only 10% of Portsmouth carers stated that they were not confident to report oral abnormalities in residents' mouths to their manager or to a dental professional. In contrast, 49% of hospital nurses did not feel confident in assessing a patient's mouth and referring onwards if necessary.

Carers' personal details, including age, gender, years of employment as a carer, length of current employment

The average age of the KSS and Portsmouth carers was similar at 41.5 years and 39.5 years respectively. As was the average

Table 4: Management of residents oral health care

23. Do you know how many residents from the care home where you work have been referred to a dentist in the last 12 months?	
Yes	4
No	21
Don't know	4
No answer	11
24. If yes, approximately how many times was there a referral to a dentist ?	
Only 3 carers answered this question	
25. In the care home where you work is it easy for residents to obtain oral health aids such as toothbrushes, toothpaste and mouthwashes ?	
Yes	23
No	11
Don't know	3
No answer	3
26. What are the difficulties in obtaining oral health aids ?	
Money	1
Families	1
Management	1
None	1
No answer	34

Table 5: Confidence in providing oral health advice and care to residents

27. Do you feel confident to clean residents' mouths when they don't want you to because they have dementia and will not co-operate ?	
Yes	23
No	11
Don't know	3
No answer	3
28. Do you feel confident to advise residents about caring for their own mouths?	
Yes	34
No	4
No answer	2
29. Do you feel confident to look in the mouth for anything abnormal and report it to a member of the nursing staff, your manager or a dental professional?	
Yes	33
No	4
No answer	3

Table 6: Carers' personal details, including age, gender, years of employment as a carer, length of current employment

30. What is your age in years?	
29 years or younger	7
30-44 years	13
45+ years	13
No answer	7
Age range 17 – 65 years	
31. What is your gender?	
Male	9
Female	26
Prefer not to say	2
No answer	3
32. How long in years and months have you worked as a carer ?	
Less than 5 years	10
5-9 years	10
10-15 years	9
15 years+	6
No answer	5
Range 1 day to 35 years	
33. How long have you worked in your current care home ?	
Less than 2 years	14
2-5 years	10
5-9 years	9
10 years +	2
No answer	5
34. Is English your first language ?	
Yes	21
No	13
No answer	6
35. What is your first language ?	
Malay	4
Thai	2
Indonesian	1
Hindi	1
Portuguese	2
Spanish	1
Greek	1
Croatian	1

time spent working as a carer (10.9 years for the KSS carers and 9.5 years for those from Portsmouth). However, a higher percentage (26%) of the Portsmouth carers were male as opposed to 18% of the KSS carers and English was not the first language of 18% of the KSS carers as opposed to 38% of those who answered this question and worked in Portsmouth. The KSS study took place in 2014, nine years before the Portsmouth study. It is therefore possible that the increase in male and non-UK carers reflects how carers are currently being recruited. Data on these topics were not collected in the hospital nurse study.

Previous training in oral health care and use of intra oral cameras

It was surprising that only 38% of the Portsmouth carers, who answered the question, reported that they had previously received training in how to help residents look after their mouths. In the hospital nurses and KSS studies 58% of nurses and 60% of KSS carers reported that they had previously received such training.

The questions on teledentistry were not asked in the KSS and hospital nurses studies. It was perhaps unsurprising that only three Portsmouth carers reported that they had previously used video conferencing to help residents access oral healthcare and prior to training 76% reported that they were not confident to use intra-oral cameras to record patients' teeth and mouths.

Table 7: Previous training in oral health care and use of intra oral cameras

36. Prior to this current study had you received any training in how to help residents to look after their mouths ?	
Yes	14
No	22
No answer	4
37. How confident are you in the use of intra-oral cameras to record patients' teeth and mouths?	
Not at all confident	26
Somewhat confident	7
Very confident	1
No answer	6
38. Have you helped residents with accessing health care through the use of videoconferencing?	
Yes	3
No	32
No answer	5
39. Do you believe residents can be offered oral and dental health care through the use of intraoral cameras and video consultation?	
Yes	19
No	0
Don't know	16
No answer	5

Personal oral hygiene regime and beliefs about oral care

Questions on this topic were not asked in the hospital nurse survey. The majority of both Portsmouth and KSS carers reported that they used a manual toothbrush. However, 30% of Portsmouth and 37% of KSS carers reported using a powered toothbrush and 73% of the Portsmouth carers claimed to use other oral hygiene tools such as interdental brushes and/or dental floss. As far as visits to see a dental professional were concerned, 54% of the Portsmouth carers, who answered the question, and 52% of the KSS carers reported that they visited once a year or more frequently. The figures for no fear of a dental visit were also similar between the two groups- 40% for the Portsmouth carers and 36% for the KSS carers.

Table 8: Personal oral hygiene regime and beliefs about oral care

40. How often do you visit a dentist/dental hygienist yourself?	
Once a year or more frequently	19
Only when I am aware of a need for a visit	11
Only when in pain	3
Never	1
I don't have a dentist	1
No answer	5
41. Which type of toothbrush do you use to clean your own mouth?	
Manual toothbrush	26
Electric toothbrush	11
No answer	3
42. Do you use any other things to clean your mouth such as small interdental brushes, dental floss, tooth picks and tongue scrapers ?	
Yes	27
No	10
No answer	3
43. Do you have any fear of visiting a dentist ?	
None	15
Only if I am going to have a filing or a crown	2
Yes for most treatments	3
Yes I am always very nervous before any dental visit	11
No fear of the dentist but fear that it might cost me a lot	6
No answer	3
44. If you are nervous before visiting a dentist, please grade your nervousness on a scale of 0 to 10. Not nervous is 0 and very, very nervous is 10	
Score 0	1
Score 1	14
Score 2	2
Score 4	3
Score 5	1
Score 6	2
Score 8	1
Score 9	2
Score 10	6
No answer	8

Limitations of the Study

The results of this small baseline study and indeed the KSS study cannot be generalised to all carers and care homes in the UK. It is likely that in both studies the respondents had some interest in helping the residents in their care homes, with their oral health and those carers who did not have this interest did not complete the questionnaires. In questionnaire studies there is also the possibility that respondents give answers to questions which do not reflect their day-to-day practices. Many of the questions were not answered by all 40 of the carers who took part in the study prior to receiving training in the provision of oral health care and the use of intraoral cameras from three dental therapy and dental hygiene students from the Portsmouth Dental Academy. One respondent reported that she attempted to answer the questions on the second day of her work as a carer. Unsurprisingly she answered "don't know" to many of the questions. Nevertheless, the results informed the training programme and in many respects were similar to those from the KSS study.

Future Developments

Teledentistry is a fast-developing aspect of oral health care. It should improve access to care for house-bound patients and those living in care homes or geographically remote areas. Dental hygienists and therapists are likely to play a key role in the development of teledentistry and should be aware of its strengths and limitations. The experiences of the three dental therapists who trained the carers in the two Portsmouth care homes are described in an article due to be published in Dental Health.

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Latha Davda was Reader and Clinical Director at the Portsmouth Dental Academy. She helped plan the study, wrote the ethics approval application and approved the final version of this study.

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A DECADE OF TECHNOLOGY-ENHANCED LEARNING IN GLOBAL DENTAL EDUCATION PROGRESS AND CHALLENGES

John Stanfield

AIM

To evaluate the progress, impact and challenges of technology-enhanced learning (TEL) in global dental education over the past decade, and explore future opportunities for integrating TEL into dental curricula.

LEARNING OBJECTIVES

To understand the evolution of TEL in dental education, its role in enhancing learning outcomes and professional development and the key challenges that need to be addressed for its effective implementation.

LEARNING OUTCOMES

By the end of this paper readers will be able to:

- Identify the advancements in TEL and their influence on dental education outcomes, including knowledge retention, clinical skills development and personalised learning experiences.
- Analyse the role of networked learning and social media in fostering global collaboration and professional development among dental students and professionals.
- Evaluate the challenges in TEL implementation, such as the digital divide, educator training needs, and the integration of TEL into hands-on clinical practice.
- Discuss the future directions for TEL in dental education, including the potential impact of artificial intelligence, mobile technologies and real-time clinical feedback on teaching and learning.

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ABSTRACT

Over the past decade, technology-enhanced learning (TEL) has significantly reshaped dental education worldwide, providing innovative approaches to teaching and learning. This paper examines the progress and challenges associated with the adoption of TEL in global dental curricula, particularly in the UK. It highlights the impact of digital tools such as virtual reality (VR), simulation systems, and networked learning platforms on enhancing clinical skills, improving knowledge retention, and promoting global collaboration among students and educators. The role of social media in professional development is explored, emphasising its utility in informal learning and interprofessional education. The COVID-19 pandemic accelerated TEL integration, underscoring its benefits and exposing disparities in access to technology. Key challenges, such as the digital divide, educator resistance, and the need for effective training, are discussed. Looking ahead, advancements in artificial intelligence, mobile technologies and real-time clinical integration present promising opportunities for further TEL development in dental education. Addressing current challenges will be essential to ensuring equitable access and maximising TEL's potential in preparing future dental professionals.

KEY WORDS

TEL, Education, Technology

Introduction

Over the last ten years, technology-enhanced learning (TEL) has become a key part of dental education across the globe. The use of digital tools and platforms has transformed how both students and educators approach teaching and learning, presenting both opportunities and challenges. In the UK, TEL has grown rapidly, especially in response to the changing needs of the academic community and the unforeseen challenges brought on by the COVID-19 pandemic. This article will look at the progress in adopting TEL within dental

education over the past decade, the hurdles faced, the impact of networked learning, how social media is being used for professional development, and the future of TEL integration in dental curricula.

The Evolution of TEL in Dental Education

The role of TEL in dental education has changed considerably, spurred on by advancements in digital technology and an increased awareness of its potential to improve learning outcomes. Early TEL initiatives were relatively modest, mainly centred around digitising lecture materials and introducing online assessments. However, as technology advanced, its use in education became more sophisticated, offering interactive learning experiences that went beyond the basics.[1]

The International Federation of Dental Educators and Associations (IFDEA) established the Global Network on Dental Education, which has been crucial in promoting TEL. Through its efforts, the network has encouraged global collaboration in creating adaptable e-learning frameworks. These frameworks have led to the development of e-learning modules, virtual simulations, and other digital resources that are now essential parts of dental education worldwide.[2]

The Impact of TEL on Dental Education Outcomes

TEL has had a noticeable effect on learning outcomes in dental education. Studies show that it can improve knowledge retention, boost clinical skills, and enhance student motivation and engagement.[3] For instance, the use of virtual reality (VR) and simulation tools has been shown to improve students' ability to apply theoretical knowledge in practical settings, particularly in areas such as local anaesthesia administration.[4] The potential of multisensory feedback VR systems has also been recognised, providing dental students with more immersive and realistic training environments, further aiding their development.[5]

TEL has also enabled more personalised learning experiences, allowing students to progress at their own pace and revisit challenging concepts as needed. This flexibility has been particularly beneficial in dental education, where the mastery of complex clinical skills often requires repeated practice and reinforcement.[6]

Networked Learning and Collaborative Platforms

The concept of networked learning, which involves connecting learners through digital networks, has gained prominence in dental education. Networked learning environments facilitate collaboration among students, educators and professionals, transcending geographical boundaries. These platforms allow for the sharing of resources, the exchange of ideas and peer-to-peer learning, which can enhance the educational experience.

In the context of dental education, networked learning has been instrumental in fostering a global community of learners and practitioners. Platforms such as discussion forums, online study groups and collaborative projects have enabled students to engage with their peers from around the world, gaining diverse perspectives on dental practices and challenges (Figure 1 & Table 1).[7] The use of such platforms was particularly beneficial during the COVID-19 pandemic, where face-to-face interactions were limited, yet the need for collaboration remained critical.

The Role of TEL During the COVID-19 Pandemic

The COVID-19 pandemic acted as a catalyst for the widespread adoption of TEL in dental education. As

Figure 1: **Social media allows me to collaborate with peers - as percentage by group[7]**

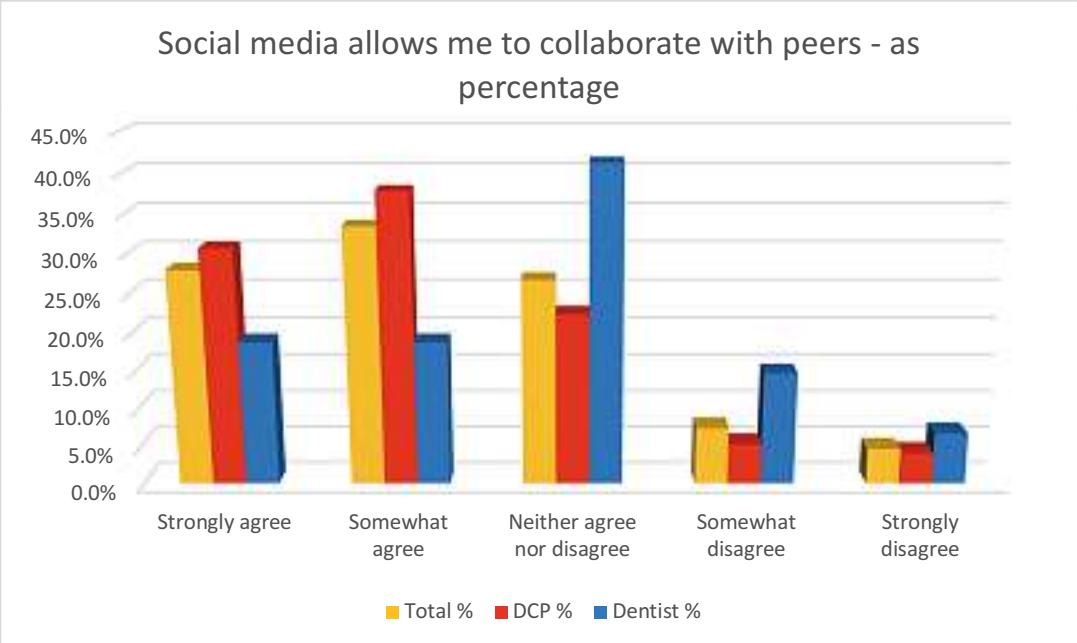

Table 1: **Social media allows me to collaborate with peers - as percentage by group[7]**

	Dentist count	Dentist %	DCP count	DCP %	Total count	Total %
Strongly agree	14	18.7%	77	30.7%	91	27.9%
Somewhat agree	14	18.7%	95	37.8%	109	33.4%
Neither agree nor disagree	31	41.3%	56	22.3%	87	26.7%
Somewhat disagree	11	14.7%	13	5.2%	24	7.4%
Strongly disagree	5	6.7%	10	4.0%	15	4.6%
Total	**75**		**251**		**326**	

universities and dental schools faced prolonged closures, the need for remote learning solutions became urgent. In the UK, dental educators rapidly transitioned to online platforms, delivering lectures, tutorials, and even clinical instruction through digital means.[8] This sudden shift to TEL highlighted both the potential of technology to support learning continuity and the challenges associated with its implementation.

During the pandemic, virtual simulations and online assessments became essential tools for maintaining educational standards. Studies conducted during this period have shown that, despite initial resistance, both students and educators adapted well to the new learning environment. Many found that TEL not only provided a viable alternative to in-person instruction but also offered unique benefits, such as the ability to review materials multiple times and engage in interactive learning activities from anywhere.[4]

However, the pandemic also exposed significant disparities in access to technology and digital literacy. These challenges underscored the importance of ensuring that all students have the necessary resources and support to engage effectively with TEL.[9]

Social Media and Professional Development

In recent years, the use of social media as a tool for professional development in dentistry has gained considerable attention. Social media platforms such as Facebook, Twitter, LinkedIn, and Instagram have become valuable resources for informal learning, networking and sharing knowledge within the dental community.[10]

Social media allows dental professionals to stay updated on the latest research, trends and best practices, often in real-time. It also provides a platform for engaging with experts and peers, participating in discussions and contributing to the broader professional discourse. In a survey conducted among UK dental professionals, a significant proportion reported using social media for informal learning, highlighting its role in continuous professional development.[11]

Moreover, social media has been instrumental in promoting interprofessional education (IPE) by connecting dental professionals with colleagues from other healthcare disciplines. This cross-disciplinary interaction is crucial in fostering a more integrated approach to patient care, reflecting the collaborative nature of modern healthcare.[11]

Despite its benefits, the use of social media in professional development is not without challenges. Issues such as the reliability of information, maintaining professional boundaries and the potential for misinformation are ongoing concerns that need to be addressed through education and awareness.[7, 10]

Challenges in the Implementation of TEL

While the benefits of TEL in dental education are well-documented, its implementation has not been without challenges. One of the primary obstacles has been the digital divide, which refers to the gap between those who have access to modern information and communication technologies and those who do not.[12] This divide is particularly pronounced in dentistry, where the cost of specialised equipment, such as VR headsets and simulation software, can be prohibitive for some institutions and students.

Another significant challenge is the need for effective training and support for educators. Many dental professionals, particularly those who have been teaching for several decades, may lack the digital literacy skills required to use TEL tools effectively. This can lead to resistance to adopting new technologies and a reliance on traditional teaching methods.[13] Educators must be provided with adequate training to integrate TEL effectively into their teaching practices and to ensure that they can utilise these tools to their full potential.[14]

Moreover, the integration of TEL into existing curricula requires careful planning and consideration. Educators must ensure that TEL complements, rather than replaces, essential hands-on clinical training. This balance is critical in dental education, where the development of practical skills is as important as the acquisition of theoretical knowledge.[7]

Future Directions and Opportunities for TEL in Dental Education

Looking ahead, the role of TEL in dental education is likely

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to continue growing. As technologies evolve, so too will the opportunities for enhancing teaching and learning in dentistry.

Artificial Intelligence and Personalised Learning

Artificial intelligence (AI) has the potential to revolutionise dental education by providing highly personalised learning experiences. AI-driven platforms can adapt to the needs of individual students, offering tailored content and feedback based on their performance. This level of personalisation can help students address their specific weaknesses and enhance their strengths, leading to more effective learning outcomes.[15]

Mobile Technologies in Dental Education

The proliferation of mobile technologies has opened new avenues for TEL in dental education. Mobile apps, e-books, and other portable learning resources allow students to access educational content anytime, anywhere, thereby facilitating continuous learning.[14] The convenience and flexibility offered by mobile learning tools are particularly valuable in dentistry, where students often need to balance clinical practice with academic study.

Integration of TEL into Clinical Practice

The future of TEL in dental education is not limited to the classroom. There is significant potential for TEL tools to be integrated into clinical practice, providing students with real-time feedback and guidance during patient interactions. This integration could bridge the gap between theory and practice, helping students to apply their knowledge more effectively in real-world settings.[16]

Addressing the Digital Divide

To fully realise the potential of TEL, it is crucial to address the digital divide that persists within dental education. Ensuring equitable access to digital resources and technologies is essential for providing all students with the opportunity to benefit from TEL. This may involve institutional investments in infrastructure, as well as initiatives to support students from disadvantaged backgrounds.[12] Additionally, partnerships between educational institutions and industry could help in reducing costs and improving access to cutting-edge technologies.[15]

Conclusion

Over the past decade, TEL has significantly transformed dental education, offering new ways to deliver content, enhance clinical skills, and engage students. The COVID-19 pandemic accelerated the adoption of TEL, highlighting both its potential and the challenges associated with its implementation. While TEL has demonstrated its value in improving educational outcomes, there are still obstacles to overcome, including the digital divide, the need for educator training, and the integration of TEL into clinical practice.

Looking forward, the continued evolution of TEL, driven by advancements in AI, mobile technologies, and networked learning, promises to further enhance dental education. By addressing the current challenges and seizing new opportunities, dental schools can ensure that they are preparing the next generation of dental professionals for success in an increasingly digital world.

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CASE STUDY

BY HAFEEZ AHMED

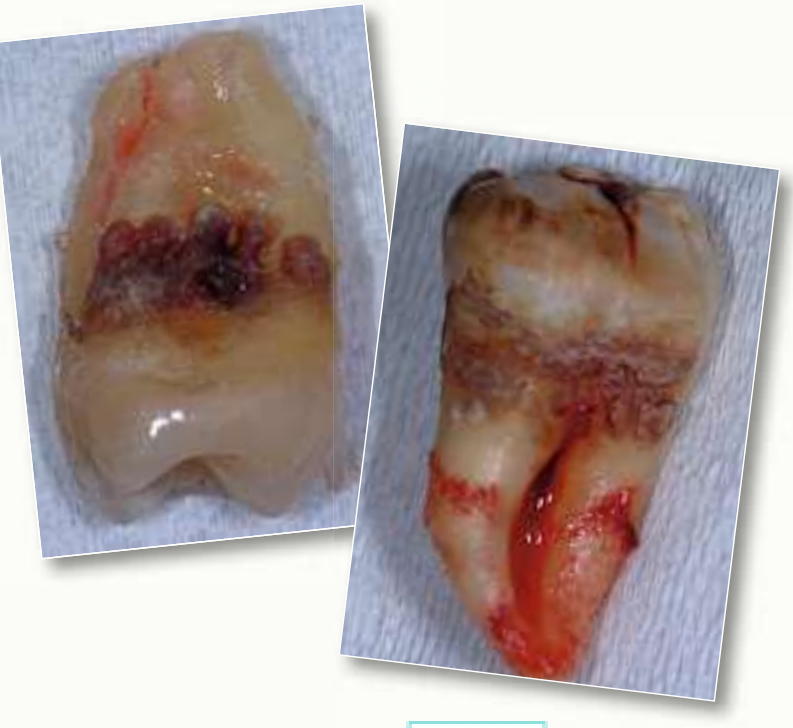
A CHALLENGING CASE

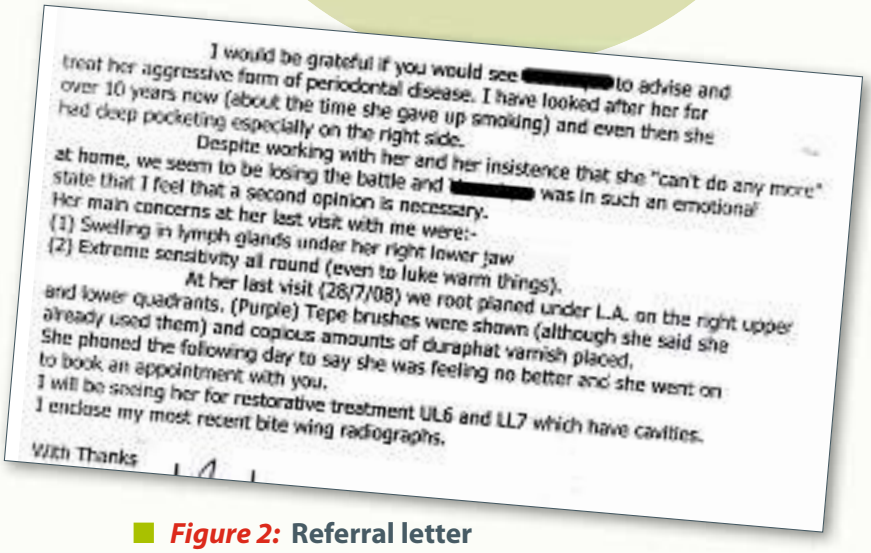
Calculus can be difficult to remove and some dental healthcare professionals underestimate this fact. Furthermore, 'ambulance chasing' lawyers remain predatory and the threat of a patient complaint and litigation is ever present! Ever mindful of our mental health, this case study highlights some of the differences between routine occupational hazards and unnecessary avoidable stresses.

Introduction

This lady was referred to me for specialist periodontal care in 2008, when I removed four teeth at her request (Fig. 1 shows two of them). These teeth had been root planed (with local anaesthetic) by the referring dentist one week prior to me extracting them. In fact, they had been root planed twice a year (with local anaesthetic) for 10 consecutive years by the referring dentist prior to the referral.

Figure 1: **Teeth had been root planed one week prior to being extraction.**





I would be grateful if you would see [redacted] to advise and treat her aggressive form of periodontal disease. I have looked after her for over 10 years now (about the time she gave up smoking) and even then she had deep pocketing especially on the right side.

Despite working with her and her insistence that she "can't do any more" at home, we seem to be losing the battle and [redacted] was in such an emotional state that I feel that a second opinion is necessary.

Her main concerns at her last visit with me were:-

(1) Swelling in lymph glands under her right lower jaw

(2) Extreme sensitivity all round (even to luke warm things).

At her last visit (28/7/08) we root planed under L.A. on the right upper and lower quadrants. (Purple) Tepe brushes were shown (although she said she already used them) and copious amounts of duraphat varnish placed.

She phoned the following day to say she was feeling no better and she went on to book an appointment with you.

I will be seeing her for restorative treatment UL6 and LL7 which have cavities.

I enclose my most recent bite wing radiographs.

With Thanks

Figure 2: **Referral letter**

The referral

I anticipated that this case was going to present some challenges as soon as I received the letter of referral (Fig. 2) and contacted the referring dentist to express my concerns. We discussed the case and he confided in me that his patient was exceptionally emotional and extraordinarily upset. He also confided in me that she had been upset for some time and that he was suspicious that she may have contacted the General Dental Council to express her concerns. We were both very clear with each other that the risk of a significant complaint, or the escalation of an existing one, was of the highest order possible. Under the circumstances, I invited him to come to his patient's consultation and join me in a joint consultation. This, in my experience, is helpful; he declined. Worryingly, and unhelpfully, and selfishly, he said: "Tell her what you need to tell her without dropping me in it".

The consultation

The consultation was one of the most difficult of my career; the patient arrived in tears and cried throughout it. She had not slept for three nights and the painkillers and antibiotics were doing nothing to reduce her discomfort.

She told me that she was medically fit and healthy, had no allergies and was not taking any medications or tablets other than painkillers and antibiotics. She had stopped smoking approximately 11 years earlier.

The examination revealed plaque free teeth. The gums did not bleed when they were gently stimulated with a probe however the bleeding on probing was close to 80%. The periodontal pockets were generally elevated above 3 mm and between 5-9 mm at mesial and distal sites in all sextants with minimal buccal recession. All teeth demonstrated

Figure 3: The patient's teeth and gums at initial consultation

Figure 4: Panoramic radiograph supplied by dentist had been taken two years prior to referral and UR8 and LL8 had been removed by her dentist since this time.

mobility between grades 1-2 and were extremely sensitive to touch; a few were untouchable. The upper left anterior teeth had over-erupted by between 1-2 mm. Full mouth long-cone periapical radiographs (LCPAs) were performed. The LCPAs confirmed that the panoramic radiograph supplied by the dentist had grossly under recorded the amount of sub gingival calculus and the extent of bone loss.[1]

Diagnosis

A diagnosis of advanced active chronic generalised adult periodontitis with bone loss up to 80-90% around some teeth was made. The upper left second molar and the lower left second molar were diagnosed with irreversible pulpitis; several other posterior teeth were also suspected of having pulpitis.

Post-examination discussion and consent

The discussion remains one of the most difficult I have ever had; the patient was upset, tired and angry. Her husband, who was eventually escorted out of the surgery, was upset, angry and volatile. Everything I said was met with anger. It is a strange phenomenon to be shouted at by two people you have never met before when you are working hard to win over their confidence. It gave me an insight into what her dentist might have experienced and a possible explanation for the residual calculus. After the consultation and before the end of the day, without being asked to do so, the patient hand delivered a copy of her dental records to my receptionist.

Treatment plan

A comprehensive risk assessment was not necessary as the situation was clearly evident. Broadly speaking the treatment was divided into:

1. Surgical debridement of all pockets above 3mm
2. Extraction of UR7, UL7, LL7 and LR8
3. Review and revise
4. Maintenance therapy

The decision to take the surgical approach was made easier as the patient ardently refused to agree to a repeat of anything previously provided by her dentist. She also refused to a 'treatment and review' approach on the teeth with pulpitis, instead, insisting that they be removed. Her refusal was helpful as I had anticipated some difficulties getting past the tight gingival cuff to the calculus deeper in the pockets below. This is usually where it is most difficult to remove[2] and I find it easier to remove when I can see it.[3]

Treatment

At the patient's insistence, which was understandable, treatment commenced the day following the consultation. It was carried out as 'full mouth disinfection' in two treatment sessions over two consecutive days (Figs. 5-9). At the end of the first session, she said, "I'd like to my keep my teeth" and, then, explained that she was talking about the ones I had extracted. She also said, "I won't be leaving without them", and, "they are still my property".

Figure 5: Smile view one week after treatment

Figure 6: Upper left palatal view one week after treatment

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Figure 7: Upper right palatal view one week post treatment

Figure 8: Lower left lingual view one week post treatment

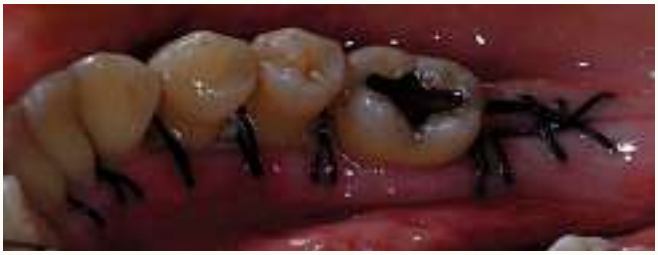


Figure 9: Lower right lingual view one week post treatment

The aim of root surface debridement is to create a smooth surface from which the patient can then easily remove newly formed plaque bacteria. It is a professional responsibility to remove it without unnecessarily damaging the root surface, this is important to note because all of the instruments available for its removal leave scratches behind. My preferred approach is to use an ultrasonic scaler to remove the bulk, this leaves a noticeably rough surface.[4] To get the surface smooth I remove any residual calculus using hand instruments, mostly a curette and occasionally a scaler. I complete the task by checking the smoothness with floss and burnishing any sharp edges or potential plaque traps.

Figure 10 shows the caries which had resulted in irreversible pulpitis. When working on calculus which may have decay under it, I use the instruments even more carefully because it is easier to damage a softer surface.[5]

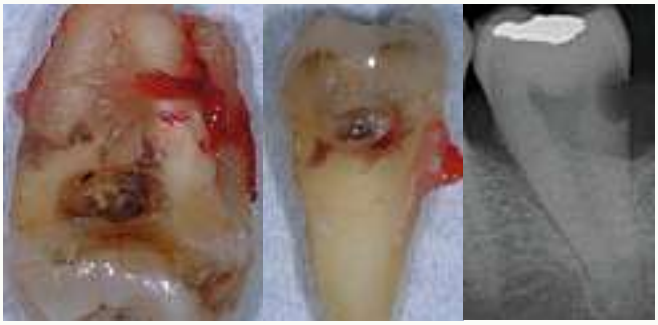


Figure 10: Caries causing the irreversible pulpitis

The healing period

The sutures were removed 10 days after the treatment. Thereafter, the patient was seen at two weekly intervals for three months for supportive periodontal therapy (SPT). Specifically, this was the mechanical disturbance of the microbial biofilm at the dento-gingival margins. This kind of intensive SPT in the healing period is common in research.[6]

The unexpected benefit of seeing a patient within weeks of treatment is that I get to see the residual calculus I have inadvertently failed to remove. It continues to astonish me, but, as hard as I try, I always find some and I remove it in the first few SPT sessions. On rare occasions, if it cannot be removed, I burnish it.

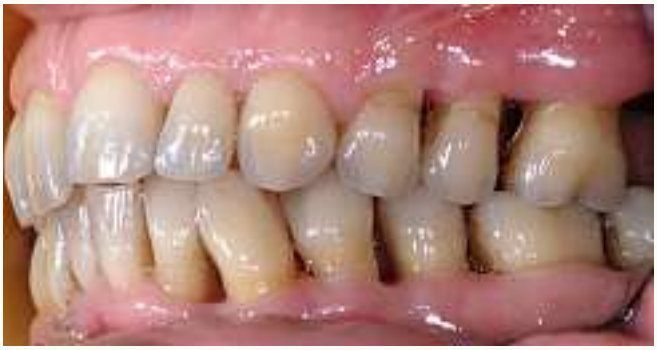
A review was conducted four months after the initial therapy. The examination revealed plaque free teeth and a plaque score at the dento-gingival margin below 20%. The gums did not bleed when they were gently stimulated with a probe and bleeding on probing was reduced to less than 10%. Periodontal pockets had been reduced to below 2mm and elevated pockets had been completely eliminated. All teeth demonstrated mobility between grades 1-2, they were vital when tested with an electronic pulp tester and there had been no further increase in overall temperature sensitivity.

Long-term

The patient has continued an uninterrupted treatment plan since she first presented in 2008 and continues to attend my practice at three monthly intervals for supportive periodontal therapy. Remarkably, I have not had to repeat active treatment, although 4 mm pockets started to reappear in year four after the initial therapy. Shortly after the Covid pandemic lockdown in 2020 she no longer wanted to have photographs taken, the ones below in Figures 11-12 were taken in 2019.

Figure 11: Left hand side buccal view 11 years after active treatment

Figure 12: Right hand side buccal view 11 years after active treatment



Conclusion

In 2009 the patient initiated a legal claim against her dentist for professional negligence and around 2011 her claim was successful. She was awarded significant damages. I truly regret being embroiled in this case; the stress was extraordinarily high, and, in my opinion, avoidable. That said, I did what I could to assist a referring colleague who had gotten himself into some bother.

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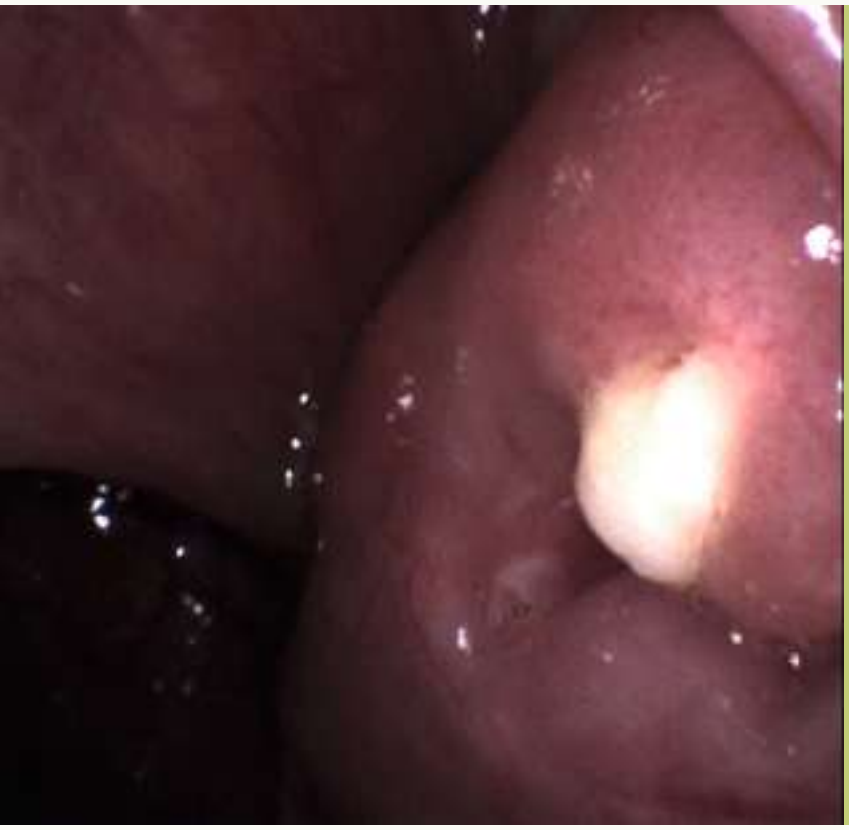


TONSIL STONES

BY **MICHAEL DILKES**

ABSTRACT

Tonsil stones, or tonsilloliths, or tonsil calculi, are collections of organic material found in the fissures, crevices and cracks on the medial surface of the palatine tonsil. Rarely they can form in other lymphoid tissue aggregations of the throat, namely in the nasopharynx (adenoids) or the tongue base (lingual tonsil).

KEY WORDS

Tonsil stone, tonsillolith, tonsil calculus, halitosis

Tonsil stones are collections of food and salivary debris that collect in the fissures on the surface of the palatine tonsil. The fissures may extend deep into the tonsil reaching the lateral limit, the tonsil capsule. Tonsil stones form by force produced during swallowing, pushing food and salivary debris deep into the fissures.

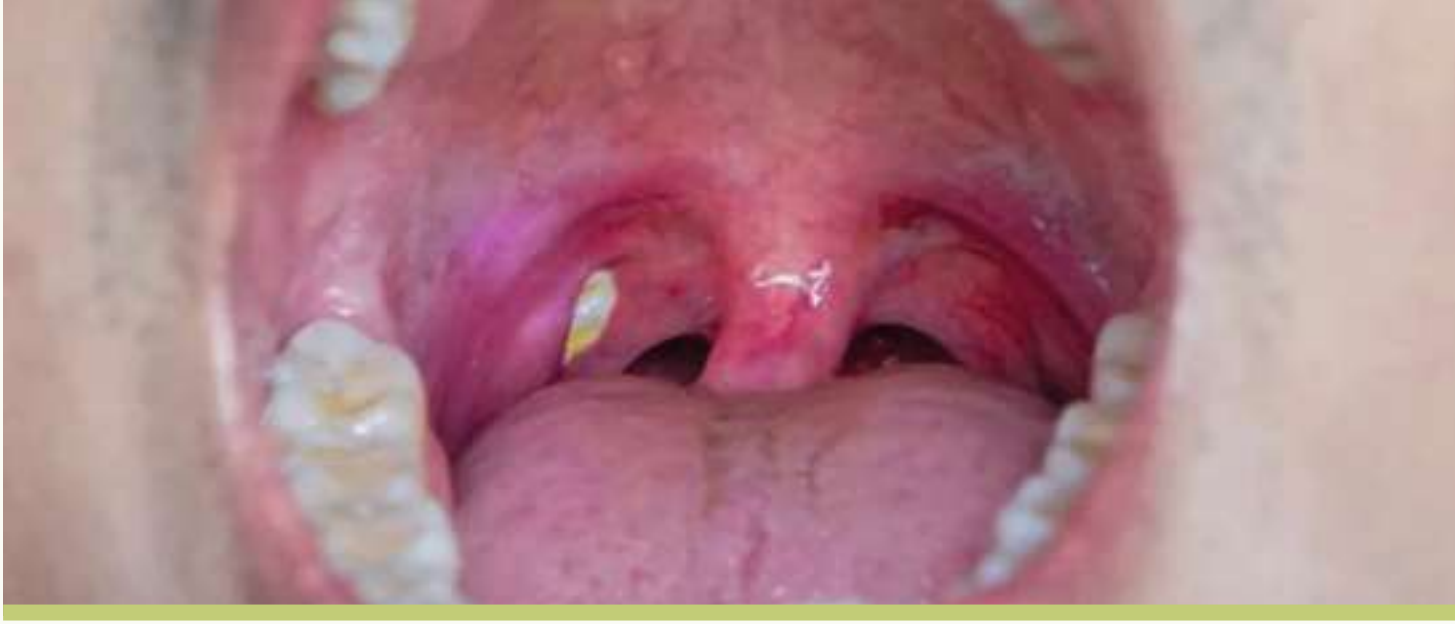
The incidence of tonsil stones is said to be around 20% of the adult population, with no sex preponderance, and tend to form in adolescent life. However, a recent study showed that 46.1% of cases in a retrospective review of oropharyngeal CT scans demonstrated the presence of tonsil stones.[1] The incidence of tonsil stones in the general population is said to be rising, as the incidence of tonsillectomy surgery drops.

Aetiology

Fissures in the tonsils are thought to arise during tonsil infection, or tonsillitis when the tonsils expand and swell. As they do so, the surface ruptures due to expansile forces, and forms a split. As the tonsillitis settles and the tonsil shrinks back, these splits remain on the tonsil surface and may persist for many years.

Symptoms

The larger the tonsil stone, the more likely it is to cause symptoms, which can be: sensation of a lump when swallowing; cough; bad taste; bad smell; halitosis; sore throat; snoring. Some tonsil stones can be more than 2cm in diameter.[2]



Diagnosis

Diagnosis is usually made on the history and clinical examination, where stones may be seen on the surface of the tonsil, or fissures where stones may be lying deeper. Use of a high-definition video-endoscope allows a magnified view of the tonsil surface and can be helpful in making the diagnosis. Imaging such as CBCT, CT or MRI may also be useful in cases that are more difficult to diagnose.

Differential diagnosis

Tonsil stone, mucous retention cyst, oropharyngeal cancer, tonsillar ulcer, viral infection.

Clinical findings

Typically, a tonsil stone appears as a yellowy-white lump on the medial tonsil surface, emanating from an underlying fissure (Fig. 1). They are often multiple and bilateral.

Radiological findings

Tonsil stones may be radiologically opaque as they calcify over time and appear on orthopantomogram, plain views of the mandibular rami, cone beam CT and axial CT of the oropharynx. Non calcifying or early tonsil stones will not be visible using these modalities, although MRI scanning can help.

Treatment

Tonsil stones tend to be very off-putting for the patient, who will often demand treatment, usually due to the bad taste, bad breath and halitosis caused. This is due to the organic nature of tonsil stone material (food and salivary debris), which slowly breaks down due to putrefying bacterial metabolism causing release of volatile sulphurous compounds. Often patients will have tried conservative measures such as probing, irrigation, suction etc, which causes bleeding and can trigger a sore throat and tonsillitis. Antibacterial throat washes (not those with ethanol or fluoride) can help if the tonsil stones are forming superficially on the tonsil surface. Chlorine dioxide-based solutions appear to be the most effective antibacterial agent for this, and when used with CetylPyridinium Acetate, also antibacterial, and a prebiotic such as PreBiulin, can offer an effective way of treating early tonsil stones. A good example of this is Pre-Bio throat and mouth wash. Persistent deep tonsil stones will need surgical treatment to remove the fissures. This is called tonsil resurfacing or cryptolysis, and is usually performed using the carbon dioxide laser and a computerised pattern generator under local anaesthetic spray anaesthesia. Otherwise, traditional dissection tonsillectomy under general anaesthesia is also effective.

Summary

Tonsil stones are relatively common and can be highly symptomatic. They are often bilateral and can occur in over 40% of the adult population. The diagnosis can be confirmed clinically alone, although radiological imaging can help in difficult cases. Treatment is initially conservative, with a combination of antibacterial throat washes and probing techniques. Persistent or intractable cases can be successfully treated with laser tonsil removal under local anaesthetic spray (tonsil resurfacing, cryptolysis, tonsillotomy) or traditional dissection tonsillectomy.

Author: Michael Dilkes specialises in the treatment of tonsil stones, blocked noses and snoring. He was a Consultant ENT Surgeon at St Bartholomew's Hospital in London for 20 years before taking early retirement. He now runs a busy private practice from HealthHub in South Central London.

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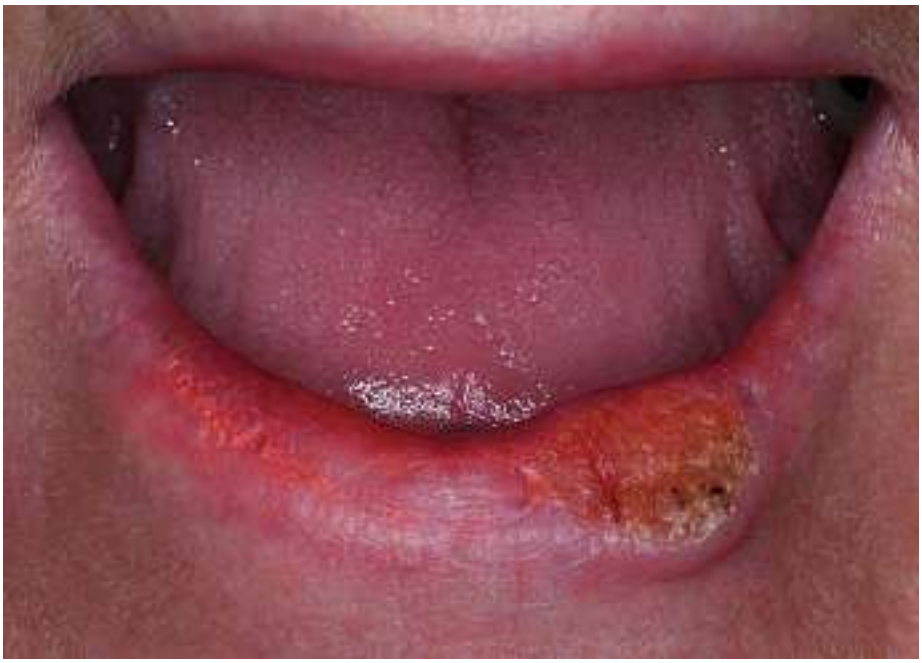
CLINICAL QUIZ

TEST YOUR KNOWLEDGE…

A 55-year-old lady complains of a painless swelling on her lower lip, which has been slowly enlarging over four months. She thought it was a cold sore and has been applying aciclovir cream but not noticed any benefit. The affected tissue is firm to palpation.



Q1. What two clinical features would not support the abnormality being a cold sore?

Q2. What type of referral is indicated?

Q3. What is the most likely diagnosis?

ANSWERS TO CLINICAL QUIZ SEPTEMBER 2024

On examination of your patient, you note a partially erupted lower left third molar.

Q1. What is the clinical term for the flap of gum partially covering the tooth?

A1. *An* operculum *is a flap or strip of gingival tissue that covers part of an erupting tooth preventing visibility of part or the entire occlusal surface.*

Q2. What is the name given to the procedure that involves removal of the flap?

A2. Surgical removal of the gingival flap is known as an 'operculectomy.'

Q3. The patient reports that the area became inflamed recently. What is the clinical term for this inflammatory process, and should the tooth now be surgically extracted?

A3. *Pericoronitis is an infection that affects lower third molars in around 95% of patients when there is an operculum present. The National Institute of Clinical Excellence (NICE) guidelines suggest that a first episode of pericoronitis, unless particularly severe, should not be considered an indication for surgery.*

Q4. How can a clinician establish if an unerupted or partially erupted third molar is in communication with the mouth?

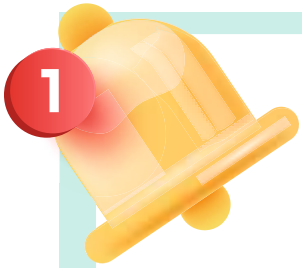
A4. *By probing the distal aspect of the second molar.*

DIARY DATES

SPRING 2025 BSDHT REGIONAL GROUP STUDY DAYS

Contact: enquiries@bsdht.org.uk

Regional Group	Date	Details	Contact (Group Secretary)	Contact Details
Eastern	Sat, 20th March 2025	Holiday Inn, **Colchester**	Amanda Kestell	easternsecretary@bsdht.org.uk
London	Thurs, 27th March 2025	TBC	Theai San	londonsecretary@bsdht.org.uk
Midlands	TBC	TBC	Joanna Ericson	midlandssecretary@bsdht.org.uk
North East	Sat, 5th April 2025	Crowne Plaza, **Durham**	Sarah Hunter (Acting)	northeastsecretary@bsdht.org.uk
North West	TBC		VACANT	northwestsecretary@bsdht.org.uk
Northern Ireland	Sat, 22nd March 2025	Marlborough Clinic Belfast, 1 Marlborough Park, **Belfast**, BT9 6XS	Gill Lemon	northernirelandsecretary@bsdht.org.uk
Scottish	Sat, 21st June 2025	Scottish Dental Show, Braehead Arena (no trade)	Emma Hutichison	scottishsecretary@bsdht.org.uk
South East	Sat, 26th April 2025	Salomon's Estate Country House, **Tunbridge Wells**	Sam Davidson	southeastsecretary@bsdht.org.uk
Southern	Saturday 15th March 2025	Holiday Inn **Winchester**	VACANT	southernsecretary@bsdht.org.uk
South West & South Wales	Sat, 22nd March 2025	St. Pierre Marriott Hotel & Country Club, St Pierre Park, **Chepstow**, NP16 6YA	Harriet Elseworthy	swswsecretary@bsdht.org.uk
South West Peninsula	Sat, 7th June 2025	TBC	Lynn Chalinder	southwestsecretary@bsdht.org.uk
Thames Valley	TBC		Keileigh Ierston (Acting)	thamesvalleysecretary@bsdht.org.uk



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